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ATTEND TO THE MANURE HEAP.

TAKE care of the manures and the crops will take care of themselves, is as true and as well worthy of being iterated and reiterated as Poor Richard's familiar proverb, "Take care of the pennies and the pounds will take care of themselves." More manure and *better*, should be the watchword of every farmer.

There is a very general impression, that passing food through the body of an animal increases its value as manure. Now, if we are to understand by this that it adds something to it that it did not possess before, it is a mistake. A given weight of the liquid and solid excrements is worth more as manure than the same weight of the food, at equal degrees of dryness, consumed by the animals from which they are derived. But it must be remembered that one hundred pounds of dry food eaten by an animal furnishes only forty pounds of dry matter in the liquid and solid excrements. In other words, there is a loss in feeding, of sixty per cent. This loss consists principally of carbon—an element of little value as manure. This forty pounds of dry matter is worth as much for manure, or nearly so, (there being a little loss of nitrogen, phosphates, &c.,) as the one hundred pounds of dry food; and of course one hundred pounds of such manure would be worth much more than one hundred pounds of the food from which it was derived. It is this fact that has led to the impression that feeding food to animals increases its value as manure. The liquid and solid excrements of animals living on clover, for instance, would be a more appropriate food of wheat and other cereals than the clover itself; and if carefully preserved, would furnish very nearly as great an amount of those elements most required by the wheat.

It can not be too often repeated that the value of the manure depends, primarily, on the composition of the food eaten by the animals. "You can not make a whistle out of a pig's tail," neither can you make good manure out of an old straw stack. You may rot it down, or feed it to animals; but it is straw still. "But can not you make it valuable by mixing other manures with it?" Certainly. If you use it for absorbing the liquid of animals living on better food, you make the heap of manure more valuable,—and the practice is a good one, and much to be commended. But the straw is straw still. If you have a purse of pennies, and you mix with them a quantity of gold dollars, you make the purse more valuable; but the gold dollars do not add to the intrinsic value of the pennies. It may be more convenient to carry them mixed together; but if the gold dollars were in one pocket and the pennies in another, you would have just as much money as though you had them all in one pocket. So it may be more convenient to mix the good manure with the poor. The latter may absorb and retain those substances which would otherwise drain away or fly off; but the mixture contains no more fertilizing elements, and would be no more valuable as manure, than if the good and the poor manure had been carefully preserved and applied separately. Unless the substances from which the manures are derived contain the necessary elements, it is vain to expect to make a valuable manure from them by any known process of feeding or fermentation.

The manure from poultry is more valuable than that from hogs, while the latter is generally more valuable than that from horses or from cattle and sheep; and many persons seem to think that different animals have different powers which, in some mysterious way, affect the quality of the manure. This is not the case—at least to any appreciable extent. The droppings of poultry are the most valuable from the fact that fowls live on richer food, and the liquids and solids are voided together. So of hogs and other animals. If the food were the same, there would be little if any difference in the value of the manure. One hundred pounds of hay, eaten by a horse, an ox, or a sheep, would furnish manure, differing perhaps in quantity, but of pre-

cisely the same absolute value. To have good manure, then, we must feed the animals on food containing a sufficient amount of fertilizing ingredients. We are anxious, at the risk of being tedious, to impress this fact on the minds of our readers.

In feeding animals, we should not only consider what will produce the most meat, but also what will furnish the richest manure. For instance, Indian corn may fatten an animal as rapidly as oil-cake, but the manure from oil-cake-fed animals is much more valuable than from those fed on corn. Ordinary meadow hay may fatten sheep as well as clover hay (though we somewhat doubt it), but the manure from the former is much inferior to that from the latter. Oil-cake, peas, beans and red-clover are among the best foods that can be used, not only for their nutritious qualities, but as also furnishing rich manure.

Another point should not be overlooked. It should be our aim to grow those plants as food for stock which impoverish the soil but little, and clover, peas, beans and turnips are, on this account, among the best.

Having got the manure, our next object must be to prevent its valuable elements from being washed away, or from being dissipated by too rapid fermentation. On most farms, more loss is sustained from the former than from the latter. On this account, the water from the building should never be allowed to run into the manure-yard. All that falls on the heap itself, can be absorbed by the judicious use of straw and waste matters. But as more water falls at some seasons of the year than is required by the manure, and not enough at other times, it would be a great advantage to have a tank into which the drainage could run when the water is in excess, and from which it could be pumped back when it is deficient. Few people have any idea of the value and convenience of a good manure tank. Water has the power of retaining a large quantity of ammonia, and the judicious use of the drainage in the tank will prevent much loss of this most valuable ingredient of manure.

Some good farmers in this vicinity are abandoning the practice of plowing in clover for wheat. They break up the sod ground for corn; clean the land as much as possible with this crop; then sow barley, followed by wheat the same fall. And they find, of course, much benefit from manuring the wheat, either by plowing in the manure before sowing, or applying it as a top-dressing. Such a practice allows the manure to remain in the barn-yard during the summer, and, by proper management, it can be reduced to "spit manure," with little or no loss of ammonia. Such manure, so fermented that it can be cut with a spade, will not weigh more than half as much as if it had been used in the fresh, unfermented state, and, of course, the cost of hauling, spreading, &c., would be reduced one-half. Such manure, too, acts quicker, and would afford the wheat plants abundance of nourishment in the fall, and give them a good start, which is a very important consideration.

Manure applied to spring crops should be thoroughly decomposed, or it has little immediate effect; and if the weather proves dry and hot, unfermented manure is as often injurious as useful. We are well aware that there is among practical farmers, as well as among scientific writers, much diversity of opinion on this point. If we plow in fresh manure, all the food of plants it contains is retained in the soil, and will ultimately exert its maximum effect. On the other hand, as manure is usually treated, there is great loss from rapid and injurious fermentation, and more especially from leaching. *But this loss can be avoided.* Before manure can be useful to any crop, it must be thoroughly decomposed—either in the heap or in the soil. Plants can not live on organized, or partially organized, matter. It is their function to convert the crude, inorganic matter of earth and air into organized matter, capable of supporting animal life. Plants can no more live on organized matter, than animals can live on the crude alkalies, acids and gases of which plants are composed.

Manures, to act immediately, therefore, must be well rotted—and in this case, as in all others, "time is money." The relative advantages of applying manure to wheat in the fall, or to spring crops, involve points which we cannot now consider. During the summer, fermentation proceeds rapidly, and it is easy to get manure well rotted for fall use; but it is difficult to get manure made in winter sufficiently decomposed for immediate application to spring crops.

The four principal agents in fermentation, are light, heat, air, and moisture. Other things being equal, those substances which contain the most nitrogen ferment the easiest. On this account, good manure will rot sooner than poor. Compression, by excluding the air, retards fermentation; an excess of water, from the same cause, has the same effect. If the heap was *perfectly* dry, no fermentation would take place. This, however, never happens in practice; but the heap is often too dry, and then the manure "fire fangs," with great loss of ammonia. The reason heat is evolved during fermentation, is owing to the oxygen of the air

uniting with the carbon and hydrogen of the manure, forming carbonic acid and water—a given quantity of carbon and hydrogen giving out just as much heat as though burned in a stove. This nascent carbonic acid has a beneficial effect on many of the ingredients of the manure, rendering them more soluble.

The principal object in preserving manures, should be to let the heap ferment slowly—not so rapidly as to drive off the ammonia. To accomplish this, the hog and cow manure, which ferment with difficulty, should be mixed with the horse and sheep manure, which have, when unmixed in a loose heap, a tendency to enter into rapid and injurious fermentation. The heap, too, should be kept compact, by allowing sheep, hogs and cattle to trample it. It must also be kept moist, but not too wet. To provide the necessary moisture at all times, it is of great advantage to have a good tank for the drainage. The liquid in the tank should be kept saturated with plaster (sulphate of lime), which, when in solution, will convert the volatile carbonate of ammonia into the fixed salt, sulphate of ammonia, and thus prevent loss. This effect will be produced not only in the tank, but, when the sulphated liquid is pumped on to the heap, the carbonate of ammonia in the heap also will be converted into a sulphate, and retained.

On every farm there is much refuse matter, which, when decomposed, will not only make a good manure, but will also help to absorb the liquid which would otherwise drain off and be lost. Every thing of this kind should be added to the heap.

BRINGING SEED WHEAT FROM THE SOUTH.

Since the advent of the midge, or weevil, the attention of farmers has been directed with increased interest to all means which in anywise tend to promote the early maturity of the wheat crop. It is the opinion of many intelligent, observing wheat growers, that if they could get the grain to ripen from five to ten days earlier, the midge would do it little, if any, harm. It is owing to its early ripening, that the Mediterranean wheat is so much less liable to injury from the midge than better but later varieties. If a variety of white wheat, which yields as well, and affords as good flour, as the Soule's, and which ripens as early as the Mediterranean, could be obtained, it would be worth thousands of dollars to the farmers of Western New York alone. The experiments which have been made in bringing seed wheat from the South, so far as we have seen and heard, are very encouraging. But in this case, it is necessary to bring the wheat every year from the South. Its early ripening is not owing to any inherent quality in the variety, but rather to the fact that all wheat ripens earlier at the South; and when it is brought North, it retains this quality the first season—or, rather, it has a *tendency* to ripen at the same period as it did where it was grown. Mr. Worthington, of Maryland, the able editor of the *American Farmer*, informs us that he has been in the habit of bringing seed wheat from the more southern States for some years, and he finds that it matures earlier. The only danger to be apprehended is that it may not be quite as hardy, and the severe winters at the North might be more likely to injure it. But we have heard of no complaints on this point.

Many persons doubt whether wheat brought from the South would ripen earlier, or even as early, as that grown farther north, and point to the fact that corn brought from the South-west does not ripen as early as that grown here. Again, corn brought from the North—from Vermont or Canada East—ripens earlier here, for one or two seasons, than when we plant that which has been raised here for some years, though of the same variety. Again, it is said that corn raised on high hills will ripen earlier when planted in the valleys, than that raised in the valleys.

These facts do not militate against the idea that wheat brought from the South will ripen earlier. It is true corn brought from the South ripens later. But corn does not ripen as early in the South as at the North, while wheat ripens much earlier. So that if the seed retains a tendency to ripen at the same time as it did where grown, the corn, when planted at the North, should ripen later than the same variety grown here, while the wheat should ripen earlier. Corn at the North does not produce as much stalk as farther south, and it matures earlier, and when it is brought South it retains more or less of this character for some years.

The principle is the same in all these cases. It is further illustrated by the effect of planting, in England, sun-flower seed grown in this country. The sun-flower matures its seed earlier and better in the dry, hot climate of America, than under the weeping skies of the British Isles; and when sun-flower seed grown here is planted in England, more and better seed is obtained the first season. On the other hand, Windsor beans succeed better in England than in this country; and when we plant seed raised there we can frequently obtain a fair crop, but if we plant seed grown here it usually

fails to produce a crop, though we get an abundance of haulm.

This subject is one of great interest to farmers and gardeners, and we shall be thankful for any facts which corroborate or militate against the principle which we have endeavored to illustrate.

HOEING WHEAT IN THE SPRING.

In a previous article, we have alluded to the advantages of bringing seed wheat from the South, for the purpose of getting the wheat so early that it may escape the attacks of the midge. Something can be done in this way; but we must also endeavor to cultivate the soil, so as to enable it to force the wheat forward. We must make it dryer, and warmer, and richer—*at least richer in the appropriate food of wheat*, i. e. *richer in ammonia, without much carbonaceous matter.*

Underdraining not only removes injurious, stagnant water, but it also makes the soil warmer, and, consequently, plants growing on it ripen earlier. The midge will force farmers to avail themselves of this fundamental means of improving their farms.

But we do not now intend to give our views on the best method of growing wheat so as to avoid the midge, but rather to ask the experience of our readers in regard to the effect of hoeing wheat in accelerating or retarding its early maturity.

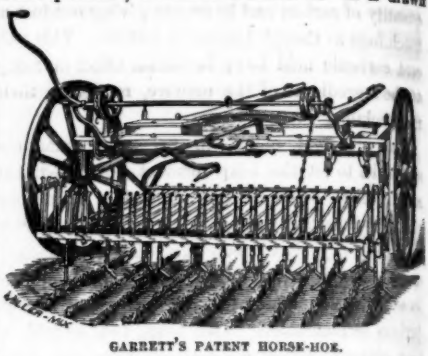
We have often seen wheat hoed in England, and always with decided benefit; but we cannot say whether it favored the ripening process or not.

Morton's *Cyclopedia of Agriculture* (one of the latest and best English authorities) says: "All drilled wheat should be hoed in spring, both for the purpose of loosening the surface and cutting up weeds; it will always pay itself, either by an increased crop or by saving in the after-cleaning of the land, and often it will make all the difference between a very good and a very bad crop."

There is one difficulty in hoeing wheat here which is not met with in England. Our springs are late, and the wheat begins to grow rapidly before the ground is sufficiently dry to hoe. Still, some farmers have adopted the practice here on a small scale, and, we believe, with very encouraging results. Those, too, who have harrowed their wheat in the spring, have found it beneficial.

Unless the land is very hard and foul, the Dutch-hoe is the best for hoeing wheat. When the drills are twelve inches apart, wheat can be hoed by hand for about seventy-five cents an acre—and we know of no cheaper method of eradicating red-root and other noxious weeds.

In England, a machine has been in use for some years for hoeing wheat, and, at the suggestion of a correspondent, we annex a cut of it. It is drawn



GARRETT'S PATENT HORSE-HOE.

by one horse, and will hoe ten acres a day. When the land is free from stones, and not too hard, it makes excellent work. It is made to correspond with the drill used for sowing the wheat. The hoes themselves are at a fixed distance apart, but the set of hoes are fixed to a movable framework, which can be easily moved to correspond with any aberration of the drill. A man with a quick eye and a steady hand can guide it so as rarely to cut up any of the wheat, especially if it has been drilled with proper care.

If our farmers will try the effect of hoeing wheat, and the result is beneficial, some of our intelligent mechanics will soon construct a machine which will do the work well, and at a cheap rate.

CORN AS FOOD FOR THE MILLION.

Friend Harris:—I have been absent from home seven months, and have not seen a number of the *Genesee Farmer* between May and December. In the last named issue there is an interesting article on Indian corn, which being a staple of great value, and of almost universal production and consumption, in this country, the subject will bear further discussion.

You remark: "The principal injury corn is subject to, arises from the quantity of water it contains when ground or shipped. The *Express* makes itself merry over the recommendation of our friend Dr. Lee, in the *Patent Office Report:* 'When farmers sell corn soon after it is ripe, there is considerable gain in not keeping it long to shrink and dry in weight.' It thinks the practical inference to be drawn from this recommendation of the Doctor, is 'obviously the short-sighted policy of *exporting water to this country.*'"

The youth who said his "father's horse could *draw* an inference, but he could not," was a fair match for the writer in the *Mark Lane Express*, who *infers* that when an American farmer sells corn it must be for exportation to England!

Water plays an important part in all vegetable and animal products; and Dr. Lee wished to let corn-growers know that ripe corn contains usually about 20 per cent. of it, and will shrink and lose weight if long kept in a dry place. The policy of

selling or keeping any staple, is a matter with which its exportation has nothing to do. It is the business of the purchaser of corn for foreign consumption to see that it is sufficiently dry to keep sound during a sea voyage, and is properly protected from dampness in its passage from one place to another. Neglect in these two particulars causes all the injury that corn, or corn meal, ever sustains in its shipment to foreign countries. The fault is in commercial men who do not understand their business, not in farmers, who generally sell their grain in a sound condition.

I repeat, it is not enough to dry corn meal or corn perfectly, and then expose it to all the changes of atmospheric humidity again, to have it keep well in a common granary at home, and much less in a hot ship's hold. If any corn-dealer doubts our knowledge on this point, let him dry in a kiln or otherwise 1,000 bushels of this grain as much as he pleases short of charring it, and then put it up in a square bin as deep as it is long and wide, and he will find that his shelled corn will imbibe both moisture and oxygen enough to heat and spoil before the solar heat of one summer is past. Masses of corn have to be often turned over to *cool*, in our climate; and I am surprised that a paper so old and well-informed as the London *Mark Lane Express* should not know that dampness can not be kept out of maize and its meal unless confined in tight barrels and impervious bags, after it has been thoroughly dried. Is it unreasonable to say and believe, that the same damp atmosphere which makes a large bin of corn moist, and heat, before it is stove-dried, will restore moisture to this porous grain, after it has been dried once, or ten times, if exposed to the same atmosphere in which it before existed? A thousand times has direct experiment proved that to expel moisture from wood or grain is not to prevent water from reëntering into their pores again, when subjected to its influence. Properly dried, and hermetically sealed, grain will keep without change in any climate for indefinite ages. In such a condition, both water and oxygen are wholly excluded.

As hay as well as grain often gets musty and damaged, I will venture to state briefly the science of the natural phenomenon.

In cold weather, damp corn or hay never becomes musty, simply because mould, or the parasitic plants that form the dust and must and rust peculiar to gramineous and cereal grasses and their seeds, do not vegetate, unless artificial heat (so to speak) is generated by chemical action, as is seen in all fermentation. The heat of a fermenting mass of horse-dung will grow a large crop of many cryptogamic plants in winter, as may now be seen at my stables. But what causes this heat in fermenting manure? What is the fermentation of a mow of damp hay, or of damp corn? It is an act of spontaneous combustion, in which oxygen combines chemically with carbon, giving rise to carbonic acid, as is seen in beer tubs, and rendering heat that was before insensible or latent, sensible and active as a chemical agent. Without that freedom of motion in the particles of an organized body that moisture confers, this spontaneous combustion will not take place; and, therefore, no fermentation or injury is witnessed.

Like smut in the heads of wheat, on ears of corn and their stalks, rust, mildew, and other fungi, the dust in hay, and must in grain, meal, or flour, are only a little less poisonous than ergot in rye, known as "horned rye." Hence, to put up new hay in a barn or stack so damp from its natural juices, or rain or dew, as to heat and sweat, is to form a hot-bed for the growth of a crop of poisonous plants at the expense of nutritive substances in the stems and leaves of half-cured grasses. Does the rust on ripening wheat rob the young seeds of their nutriment? Every adult reader knows that the harvest is often wholly blighted by this parasite, which appropriates to itself the organized elements that otherwise would form grain. In the same way, damp hay and grain in a barn may be devoured by millions of microscopic plants so far as to diminish their value one-half or more.

Warmth and humidity generated as I have endeavored to explain, are the forces which most favor the growth of mold, mildew, and of all cellular plants of a similar character. It should be remarked that in all vegetable combustion or fermentation, water is one of the products; so that there is a self-sustaining humidity present in spoiling hay, grain, or meat, after chemical action has once commenced. But keep all moisture away from well-dried meat, fruit, hay, grain, meal, and flour, and they will never *begin* to spoil. A piece of soft wood, like old field pine or basswood, will rot in two years if placed on the ground out in the air, dew, and rain. If kept dry in a well-ventilated house, wood of the same kind will remain sound for several centuries.

There is nothing new in these remarks; and I hardly feel justified in alluding, in this connection, to my humble efforts twenty years ago, when connected with the press in Buffalo, to improve the commerce of the lakes and the revenue of the Erie canal, by extending both the inland and foreign trade in Indian corn. At that time, the tolls on corn and corn meal amounted to nearly a prohibition. They were much reduced when the writer represented the city of Buffalo in the Assembly, and just before the famine in Ireland greatly favored the exportation of cheap breadstuffs. Had those who grow corn to the best advantage been as zealous to advance their interests, both at home and abroad, as the cotton-growers have been, their annual export of corn would now exceed in value that of American cotton. But corn-growers have thought it wise to turn their backs toward their earliest and most sincere friends. I was present in the United States Senate when the small appropriation of $500 per annum to pay Dr. Lewis C. Beck for making researches in relation to the preservation of breadstuffs, as published in the *Patent Office Reports* for 1848 and 1849, was voted down. Dr. Beck was a man of true science, and no politician; therefore congressmen had no use for his services.

I might quote from his analyses, and those of other chemists, to show that the *Mark Lane Express* over estimates the quantity of gluten and oil in corn, but it is hardly worth while for any practical purpose. Corn is not better than wheat for making bread; although I regard it as more healthy to eat some corn bread every day, particularly at the South, than all wheat bread. But as a matter of economy, corn meal is far better than flour "for the million."

The remark of the *Express*, that "Jonathan can never succeed in *learning* John Bull to eat either sour flour or musty meal," is expressed in such bad English that a tyro or a foreigner must have written it. If Jonathan "learns" anything, it is his own acquisition. He can not "learn" for another, not even John Bull, unless he *teaches* him the thing learnt. In that regard, almost any American schoolboy might teach (not learn) John Bull to use the Queen's English with more propriety. The conceit of English editors is amazing. Their sharpness is so keen as to discover tricks and fraud in every American statement of a scientific truth, or agricultural fact; and all to cheat "the mother country!" Let Englishmen visit the United States, and put up corn and meal as they believe the operation ought to be performed to suit their markets; then Jonathan will concentrate his energies on improvements in tillage, manuring, and farm economy generally, and perhaps prosper without snubbing.

University of Georgia, Dec., 1858. D. LEE.

NO CATTLE, NO MANURE—NO MANURE, NO CORN

MESSRS. EDITORS:—The above, although a Scotch maxim, will apply with equal force to the farmer of this country. And not only can we trace the origin of a good crop of corn directly to the cattle of a farmer, but by still closer scrutiny we can not fail to discover the fact that the very basis of good and profitable farming has its scource in and derives its very existence from the stock connected with the farm; for, without the cattle, we get no manure; and if we are deprived of the manure, we have taken from us the very element requisite to insure success in the pursuit of agriculture; for not only do we find ourselves deprived of a good crop of corn as a natural consequence attendant upon the practice of not keeping the usual supply of stock, but soon we shall find that our grass crop is a failure, caused by the deterioration of the soil, which, in common with other things connected with our farming operations, has failed to receive the "top-dressing" from the barn-yard, which is so essential in order that we may receive a remunerative crop of hay and a good after-crop of rowen.

The orchard also depends upon the barn-yard for an annual supply of manure, in order to produce a golden harvest of fruit, so essential to the health and comfort of a family, and also upon which you depend in a measure for the annual filling of your purse, incident upon your fall sales.

The garden, also,—that great resort for boiled dinners, so essential to the health of the tiller of the soil—the place from which we derive many subjects for after contemplation and reference, and in which we pass many a pleasant hour with our wife or our children—is also dependent upon the barn-yard, which is an essential element in connection with a *good* garden—an element the absence of which can not be recompensed by any amount of imported guano or patent fertilizers.

The utter dependence of a good crop of grain upon the stock connected with the farm, must be apparent to any person who has taken ordinary pains to inform himself. We may send to Peru for guano, we may buy all of the new phosphates, or we may patronize the plaster mills to our hearts' content; and after we have exhausted all these sources, we are sure to fail of being successful cultivators of grain, unless we have a good yard of manure to resort to. Certainly we can raise grain by the use of guano, and as certain it is that we may get good crops; but ask any one well posted, and he will tell you the chances are vastly in favor of the barn-yard as a fertilizer for the successful growing of any kind of grain.

The subject of stock raising is fast becoming popular among our most astute farmers—those that not only look to the profits derived from the farm for the present year, but who wisely calculate for succeeding years of abundant harvest, and full granaries for years to come.

It was not my intention, when I commenced this subject, to have continued it to so great a length; but if you consider it proper, I would like to make a few suggestions with regard to the management necessary in order to avail ourselves of the best mode of making a good yard of manure. In the first place, you want a good yard—one well calculated for making manure. Many persons have of late fallen into an error (in my estimation) with regard to the kind of a yard requisite, by choosing a too elevated and consequently dry yard. Now we will admit that a too wet yard is equally objectionable, but we would insist upon one of as near a medium degree of wetness as can conveniently be procured, for the reason that the stock can much more easily pulverize and mix together the contents of a moist yard, than they can of one very dry. The yard should also be often plowed, as frequent stirrings of the soil will tend to help forward the process of decomposition of the refuse straw and hay which should always find its way into the barn-yard.

With regard to the winter management, I suppose every reader of the *Genesee Farmer* is well enough acquainted with the advantages to be derived from keeping the manure from his stables under cover until wanted for use. If they are not, allow me to ask of them one favor, which is, that they try the experiment for one year; and if they are not satisfied that the advantages derived from this course amply pay them for the expense attendant upon it, then their experience will differ very materially from mine, under the same circumstances. Do not now hastily condemn this practice, nor consider that there is no improving upon the practice of your fathers, who, forsooth, raised good corn without sheltering their manure; but try it, and let us know the result through the pages of the *Farmer*. H. G. PALMER.

Lebanon, Conn., Nov., 1858.

FOWL DISEASE.—Having met with a very singular disease among my poultry, I thought I would communicate an account of it for your valuable paper. We picked up a chicken that was so blosted up that we thought it was just dying. Its head was drawn over to one side. On examining it, the skin appeared as if it had been blowed up; but upon puncturing the skin, the wind whistled out; and after repeating the operation a few times, the chicken recovered entirely, and is now one of the handsomest fowls we have.—MYRON E. TAYLOR, *Rockland Co., N. Y.*

AN INTERESTING LETTER FROM COL. WARE, OF VIRGINIA.

Messrs. Editors:—In your April number, page 106, you say, "The editor of the *Southern Planter* states that several instances have been brought to his notice where cattle have died from eating corn stalks that had been chewed by hogs. Have any of our readers observed the same effect?" This, the Valley of Virginia, is a stock-growing country, and it is usual to cut up our corn green, (after the stubble is exhausted, toward seeding time,) to feed to hogs to keep them growing and fattening until penned. They not only consume the corn, but chew up all the stalks, extract the substance, and drop the balance. It has been known, ever since we adopted this plan, that if the cattle swallow this refuse of the chewed stalks, it would certainly cause their death, and therefore put it beyond their reach.

Again, page 131: "The duty of kindness to domestic animals." There is no diversity of opinion, among humane persons, on that subject; but is not kindness to animals the *interest* of their owners? As to the horse, I presume all tamers of wild horses accomplish their purpose as effectually (if not more so) by kindness as by any other course. You can not tame them properly by the lash. Whip a horse into submission, and whenever anything unusual occurs he looks for the whip, and is at once for clearing himself of danger by the use of his heels, and many times lives are endangered if not lost by it. On the contrary, a horse broken by uniform and patient kindness, gives his owner his confidence; and when anything unusual occurs, he quietly and patiently awaits his owner's voice. I have proved this very effectually with the high-mettled blooded horse. With all animals, the tamer you keep them the faster they will thrive. You can not get them tame without obtaining their confidence, and that you can not get without kindness. Cattle, all graziers know, will travel less and ruminate more, if so tame that you can approach and handle them without disturbing their repose, and consequently will thrive faster on the same food than if wild. With hogs, who, among their raisers and feeders, does not know that such as he can approach and rub and handle, and that quietly fill themselves and lie down and rest, will fatten infinitely faster than hogs wild with fear, that run at the approach of man. Sheep, it is well known, thrive infinitely faster when so tame that they can be approached and handled in the open field, and will lose the habit of jumping up and running when dogs come into the field, and be infinitely more safe from their destructive tendency, and do better in every way.

Again: "Are sheep or hogs the most profitable stock to fatten?" I am inclined to think neither are profitable, if not of the right kind. If both are, I say sheep. They both can be brought to maturity in early life. All must agree that the hog is the most troublesome animal on the farm, and requires, I contend, incalculably more grain to mature and and prepare him for slaughter. The grain required to *fatten* one hog would be sufficient to raise and fatten several sheep. But in selecting the kind of sheep to *fatten*, a judicious farmer would hardly look for any other than the mutton sheep—would hardly look for the fine-wooled sheep to fatten for market by way of profit. Of all sheep, I prefer the Cotswold, from experience. They mature early, are large, hardy, and take on fat easy. During the summer and fall that they are one year old, (not fed on grain,) no mutton can be more delicately flavored, juicy, and tender. Over two years old, many muttons are better, as they then tallow too heavily for the appetite; but the butcher will then give almost any price for them; and what prudent man wishes to keep muttons to four years old, when he can sell them at one year old at much better prices than any other sheep at four? I have rarely, if ever, sold my muttons of this breed, the fall after one year old, under $10 each, and have sold older ones much higher; and never sold them, at the same age, under $8 each without having fed grain at all; and the fleece amply pays the keep. Can any breed of hogs show such *clear* profit and in so short time? and they have no wool to pay cost of keep. To meet any objection as to the danger of their loss by dogs, I will say I have had this breed some years in its purity, having always imported the sheep that won the high prizes of the Royal Agricultural Society of England, and have never lost a thorough-bed by dogs. They are large, heavy, sluggish sheep, with great aptitude to take on fat; they fill themselves and lie down and ruminate like cattle, and do not jump up and run when anything comes into the field. It is to this I ascribe their safety from dogs, as dogs are not apt to seize anything that does not run from them. But I believe that if common sheep were in the same pasture, their running would induce Cotswolds to do so too; and being bad runners, from their weight and sluggishness, the dogs would be most likely to kill the Cotswolds first.

"Pasturing sheep in orchards." I think this would be hazardous, if they trees were of any value, they are so apt to bark them, unless the bark was always coated with something offensive to the sheep.

JOSIAH WM. WARE.

Near Berryville, Clark Co., Va., Dec., 1853.

PROGRESS OF AGRICULTURE AND HORTICULTURE.

Editors Genesee Farmer:—It is now eighteen years since I came to this country, and during that time I have watched the progress of agriculture and horticulture, and notice a vast improvement in both. The farmers are finding that deep plowing and thorough draining are most essential to good husbandry. There is also more attention paid to the accumulation of the manure heap. Root crops and green food are also receiving some attention.

I would like to see more attention paid to the cultivation of carrots and mangel wurzel for feeding to cattle. I have grown carrots for seventeen years, and find that they pay well at twenty cents per bushel. I have cultivated the mangel wurzel for four years, with good success. This year I tried a portion of the ground with the *Yellow Globe* mangel, and they turned out very fine. Six of the largest weighed over 62 lbs. I had over 900 bushels per acre. They were grown on ground that was considered worthless a few years since, being a portion of land from which clay and sand for making bricks had been taken. When I commenced leveling and draining it, my employer said "it would not pay;" but now it is the best land we have.

Troy, N. Y. JOSEPH CALDWELL.

RENOVATING WORN OUT LANDS.

EDITORS GENESEE FARMER:—For the benefit of others similarly situated, allow me to give your readers my experience in renovating worn out lands.

My father bought a farm of the "worn out lands," and I, being the farmer, found it rather discouraging business. The first year or two was a failure, neither of us having much experience in farming. There was no manure on the farm, and none for sale in the vicinity. In the winter, I plowed a very poor piece of ground, and sowed it to buckwheat in the spring as soon as the frost would admit. It grew well; and as soon as enough ripened to seed the ground, I plowed it under. It came on very fine, and about the middle of September I plowed it under again, sowing the ground to wheat and timothy. The next harvest the neighbors were astonished at the excellent crop raised. The timothy came on finely, and that ridge of poor land yielded an excellent crop of grass the next year.

It requires a good deal of labor to work land in this manner, but in my case it has paid. I kept an account of my labor and expenses, and the wheat crop alone paid all the expenses and yielded me *eighty cents* a day for my labor, and the ground was left in good order.

Another piece, on which the oats were so poor that cattle were turned in to harvest them, was plowed in August and sowed to buckwheat; and the fall being very wet, it had a large growth. When in full bloom, this was turned under and remained until spring, when it was prepared and sowed to oats again. The crop was heavy, notwithstanding the season was dry. Rye succeeded the oats in the fall, and was a good crop.

I can not say how long this manuring will last, though the fields mentioned still remain in good condition. They have been well treated since, with occasionally a few loads of barn-yard manure. I consider this the best way to improve a farm where there is no manure on hand or to be purchased.

Ritchie C. H., Va. J. M. W.

REMARKS.—Buckwheat may be, and probably is, an excellent green manure where it is desirable to have a large and quick growth, as it will grow well on quite poor land. We should, however, recommend our correspondent to follow his buckwheat with red clover, and practice plowing in a good coat of that, before every grain crop. That veteran wheat-grower, Gen. HARMON, of Wheatland, N. Y., says he has manured wheat land for thirty years or more by plowing in clover, and it bore good crops and improved all the time. EDS.

OPEN DRAINS.—I construct open drains through the lowest part of my fields by first setting a stake at each angle. From these stakes I set off, each way, eight feet for the center of two ridges running parallel one to the other. By plowing these ridges year after year, in this way, I get three good ditches and two ridges sixteen feet wide, which I keep in grass. Drains made in this way will not fill up by frost heaving the banks, and will be found cheap and durable.—D. N., *Hammond, N. Y.*

GENERAL IMPORTANCE OF AGRICULTURE.

EVERY reflecting man recognizes the nature, and and admits the value, of agriculture; yet every such man is not himself a farmer, nor can he conveniently become one—the lots of many being cast in other departments of labor. Probably there are more who would cultivate farms, if they were fortunate enough to possess them, than there are who, possessing them, would forsake them for a vocation less stable. Age, with its wisdom, likes the farm better than youth with its too frequent vain show and empty aspirations.

If it be true, as MONTESQUIEU observes, that "countries are not cultivated in proportion to their fertility, but to their liberty," then republican America must soon rank second to no other nation in her perfection of terra-culture. Our agricultural population may not directly lead or control the country, yet they hold the truest sword in its defence; and in the heat of any contest, will imbibe new courage from the recollection of their pleasant and enduring fields at home.

"I desire to present some thoughts upon this subject, in the form of distinct propositions.

1. As the roots and trunk of a tree are to its branches, so is agriculture to society; it upholds it, and draws from the earth and dispenses its nourishment to the different branches of the social fabric, while at the same time it derives new vigor from a vital reciprocity. Hence

2. Agriculture is the foundation of a well-established nation, and the most stable element of its wealth, independence, and greatness. Therefore

3. Agriculture should receive the fostering care of the State, and the respect and encouragement of every patriot.

4. Every farmer, to prosecute his business successfully, should feel and cherish an ambition in it, and a conviction that he is just the man for it; and, however unlettered he may be, under such incentives he will make great progress, not only in the profitable cultivation of his farm, but also in mental improvement. If he has not the stimulus of emulation, he should choose a business where he may be thus prompted, as agriculture can well spare the "slothful in business."

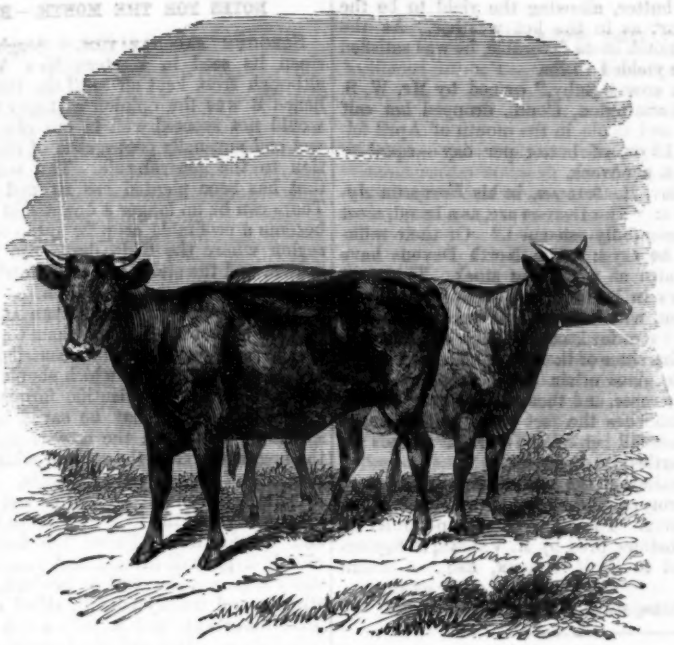
5. Although farmers as a body may never expect to become erudite scholars, each and every one would be greatly benefitted by a small library of standard agricultural and miscellaneous books. They are faithful companions that always instruct and elevate.

6. If it be the "mind that makes the man," it is not alone in its intellectual phase, but also in its moral. Every farmer who chooses, can attain to a degree of intellectual culture, and to a moral standard second to none. He can and ought to make himself the "highest style of man."

7. Although—in their well-being—vocations are mutually dependent, to a greater or less degree, the farmer should never mistrust the value of his profession, but should defend its dignity and worth by a commensurate independence before all men.

West Medford, Mass. D. W. L.

SAND, to be useful for plants, must be combined with alkali to dissolve it and render it soluble, so that it can be drawn up with the forces of the plant. It is then called *silicate.*



YEARLING DEVONSHIRE HEIFERS, BRED BY M. VASSAR, SPRINGSIDE, POUGHKEEPSIE, N. Y.

DEVONSHIRE CATTLE.

The Devons are a valuable and distinct breed, possessing several characteristics peculiar to themselves, and of which they are very tenacious. They are uniformly red, varying to a bright bay or mahogany; no white on them if pure, excepting the brush of the tail, which is considered a sure test of the purity of blood. When calves, the end of the tail which forms the brush is always darker in color than the rest of the body; but by the time they are eight or ten months old, it is purely white, which never fails in a pure Devon, and generally runs with the blood to a very great extent.

There were originally two varieties of Devons, possessing different properties of excellence. The South Devons were represented as heavy in the fore-quarters; long and elevated horns; active, vigorous, and lofty in their carriage; but rather light behind, and their tails sometimes heavy; their color a light red.

The North Devons are small in the bone, fine and clean in the limb, straight on the back, full in the chest, prominent and bright in the eyes, keen in their looks, sprightly and active, and, as Lord Somerville said, "possess more of the appearance of what is termed blood in horses, than any other breed of cattle." Their horns are long, fine, and tapering, and yellow at the roots when young. Skin yellow, soft and silky to the hand, and hair frequently curled or wavy. Circle around the eyes and flesh of the muzzle yellow or orange color. Their uniform appearance renders them very easy to match, for labor, for which none can exceed them. They are excellent travelers, docile and tractable, and always command the highest price for working cattle. Their beef is of the very best quality, being what fleshers term "well mixed," with fat and lean, and proves remarkably good when dressed, and yields as much in proportion to the food they consume as any other breed.

The Devon cows, as a breed, are not generally considered great milkers, so far as quantity is concerned; yet there are some exceptions; but for butter we hope to prove they are equal to any other breed. Like our native or common cows, there are poor, middling, and good milkers among them. Their milk is remarkable for its richness, eight quarts producing on an average one pound of butter, and the butter noted for its richness and fine flavor. Instances are on record of Devon cows having produced an average yield of over 200 lbs. per cow per year, in a dairy of twenty cows.

We once were the owner of a Devon cow which dropped her calf late in autumn; and from the 10th of December to the 10th of January, including both days, there were made from her milk 50 lbs. of well-worked butter — nearly equal to 2 lbs. per day. She was fed with hay, roots, and buckwheat bran. We also had a heifer two years old, from whose milk, in the month of June, was made one pound of butter per day on grass alone, and not very good at that.

Mr. Andrews, of Connecticut, says he made from one of his Devon cows 9 lbs. 6 oz. of butter in seven successive days in the month of January. Another cow of his yielded in ten days in June, on grass alone, 129 quarts of milk, making 13 lbs. of butter in the hottest weather of the month. From this circumstance he was induced to try the ten succeeding days, which reached into July, and found the yield to be 139½ quarts to a yield of 14

lbs. 1 oz. of butter, allowing the yield to be the same per quart as in the hot weather. As the weather was much more favorable, he was satisfied it would have yielded 15 lbs.

The Devon cow "Ruby," owned by Mr. W. S. Cowles, of Farmington, Conn., dropped her calf in February, and made in the month of April following 1 lb. 13 oz. of butter per day—equal to nearly 12¼ lbs. per week.

The late Rev. H. Colman, in his *European Agriculture*, says: "The Devons are, as a breed, most highly and deservedly esteemed." Of their milking qualities he says: "The North Devons have strong advocates as a milking stock. The most productive cow in butter which I have found, was a North Devon, which for several weeks in succession, without extra feed, made 21 lbs. of butter per week. The character of the owner places it beyond a doubt." He gives other cases corroborating the above. These cases, and those before enumerated, we think establishes the fact that the Devons, *as milkers*, do not fall behind the "crack" breeds for milking properties.

The illustrations at the head of this article were taken in ambrotype, and engraved by Messrs. Losing & Barritt. They are correct portraits of two yearling heifers, bred by M. Vassar, at Springside, and sold to E. R. Brown, Esq., of Mount Hope, Miss.

C. N. BEMENT.

Springside, Po'keepsie, N. Y., Jan'y, 1858.

WHEAT vs. OATS FOR SEEDING IN.

Messrs. Editors:—It is the practice of many of the farmers of this section, to seed their fields in wheat in preference to other grain, especially oats. They aver that oats abstract a greater amount of fertility from the soil than wheat, thereby leaving it in a poorer condition for a grass crop.

The rotation of crops generally followed here is, at the first breaking, oats; second crop, potatoes; third, corn; fourth, seeding down in wheat or oats. The latter many object to, "for," they say, "oats sap the ground more than wheat." Whether this objection is well grounded, I know not, and would like to hear from some of your correspondents on this point. My own observations are not in accordance with this opinion.

In a field, the whole of which received the same amount of manure, and the same treatment, one portion was seeded in wheat and the other in oats. On the former, the crop of grass fell short the past season, and it requires breaking again; while the latter yielded an average crop.

This year, a neighbor had a field which had been sown to oats the two preceding years, without being manured highly. He wished to plant the field with corn; but he thought if oats "sapped" the ground so badly, corn would yield a poor return. He therefore decided to plant another portion of the field, which immediately joined it, and which was planted to pototoes last year, and very highly manured. When plowing the field, he encroached a few feet on the stubble ground, on which two rows of corn were planted, receiving the same dressing and care as the rest of the field. At harvest, all the sound corn taken from the field was gathered from those two rows planted on the stubble.

Belfast, Me., 1858. G. E. BRACKETT.

NOTES FOR THE MONTH.—BY S. W.

Sorghum saccharatum.—Sorghum failed to ripen its seed in Western New York in 1857, although frost kept off until the 18th of October; hence it was the opinion of many that this cane would not succeed well in our climate. But the wet and unusually cool season of 1857 is an exception to the general rule. This season, the little that has been planted has ripened its seed well. There can be no longer a doubt that sorghum is to become a profitable crop for syrup or sugar in any region where the Ohio dent corn is successfully grown, and the stalks and very nutritious seed will go far to pay for the cultivation.

The Importance of Shelter and Nutritious Food for Stock.—Your Gorham correspondent, in the *Farmer* for December, contributes a scientific article on this subject, which should be studied by every neophyte in scientific farming. It shows how much fodder may be saved by warm, tidy stabling. Although the cow is more filthy than the hog, she prefers the cold air without to a stable redolent of her own excrements. But if she is permitted to run out on cold or wet nights, it will take nearly half the food she eats to keep her warm and comfortable. Hence the importance of a cleanly-kept, well-littered and ventilated stall. If straw is scarce, saw-dust or tan-bark is a good substitute; and freshly-burned, sifted coal ashes, is a good absorbent, and it puts a soft covering to a naked floor. Although good, early-cut, well-cured hay, is the best winter food for bovines, a little linseed meal, or Indian meal, or roots, fed daily, will more than save its cost in hay, while it adds to the health and flesh of the animal; and such rations are indispensable to keep up the milk of cows.

The best Soil improvidently tilled.—A friend writes from Aurora, Cayuga county, that his neighbor is overwhelmed with the idea of the manure necessary to his now very hungry fifty acres. This land was in the beginning the beau ideal of a soil for both grain and grass—a clay loam, ameliorated by lime pebbles, surface-drained by a gentle declivity to the bay, and a deep, narrow ravine, as an underdrain to boot! A Pennsylvania German, on the opposite shore of the lake, five miles further down, to whom I told this story, said: "Tell him to sow more clover seed and less timothy." This German has 130 acres, keeps seventeen head of bovines, three horses, fifty sheep, and hogs to pork his family and helpers. He grows corn, wheat, oats, and his own red clover seed, very little timothy; but he never fails to sow from six to twelve bushels of clover seed every year. He says he can not get so good or so large a crop of wheat with as little labor as formerly, although he feeds his soil better. It would thus seem that a kind Providence favors a pioneer in a new country, in pity for his privations, by giving him ample crops for little outlay or labor. But when he waxes fat, and eschews Nature's lavish bounties, she lets him know that they are not indefeasible, and he soon learns that if he would escape the decree that "man shall live by the sweat of his face," he must expect to pay the penalty.

S. W.

Waterloo, N. Y., Dec. 6, 1858.

A box 26 inches by 15.2 inches square, and 8 inches deep, will contain one bushel.

FRUIT GROWERS' SOCIETY OF WESTERN N. Y.

The Annual Meeting was held at Rochester, January 5th and 6th, 1859, President Norton in the chair, and was more largely attended than any previous meeting, embracing twenty-three counties of Western New York, or all west of and including Oswego, Onondaga, and Cortland. This Society has effected more since its organization than any similar one in the country.

R. R. Scott, Chairman of the Committee on "Causes of Leaf Blight in the Pear," reported. "There is now very little difference of opinion as to the proximate cause of the disease. The important question now is the means of prevention," on which it is hoped the Committee will make a full report at the next meeting. They advise against "the use of ferruginous matter applied to the soil as useless."

Pending the reports of Nominating and Business Committees, an interesting impromptu debate occurred on "Pears suitable for Quince Stocks," and "Ripening Winter Pears."

PEARS SUITABLE FOR QUINCE STOCKS.

Prof. Coppock had found the union *perfect*, in an *Urbaniste* of eight inches circumference. The *Belle Lucrative* made an equally complete junction, and so did the *Vicar of Winkfield*, while in the *Bartlett*, *Columbia*, and others, it was very imperfect.

Dr. Spence, of Yates, advised the multiplication of records of cases, that, from the united experience of many members, we may arrive at perfectly correct conclusions.

RIPENING WINTER PEARS.

Prof. Coppock thought that if we understood how to ripen Winter Pears, we might have that most delicious fruit in perfection for the greater part of the year. For instance, the *Vicar of Winkfield* is pronounced by many to be merely fit for cooking, and hardly worth the raising. This variety is a most uniform bearer, with constant crops of well-matured fruit, which should remain on the tree as late as safe from frost. Then keep them in the ordinary manner, in cool, dry boxes, until such time as it is desirable to perfect them. "Just behind my kitchen stove, where the temperature was never much less than ninety degrees, I put a pine box with shelves in it, and any pears I put in this box would ripen, in ten days, most perfectly." Fruit ripened in this way during December, he had sold at six dollars per bushel, and they were retailed at from five to ten cents each.

Dr. Spence had tried warmth, and all other ways, to ripen *Vicar of Winkfield* pears; but *being from standard trees*, he had never been able to ripen them well. Mr. Coppock's *Vicars* were dwarf trees.

P. Barry, of Monroe, thought there was no great difficulty in ripening Winter Pears. First, have the fruit well-grown, perfect fruit, and you can ripen it as you do *Baldwin* apples. The *Vicar* is a very full bearer, and the general crop will be improved by going over the trees in summer, and picking off all the imperfect fruit. Leave the good fruit on the trees just as long as possible; then keep them in a cool place till into December. In ripening Winter Pears, they must not be exposed to the atmosphere.

Prof. Coppock wished to know how to ripen the *Glout Morceau*, so as to get a good flavor. It is juicy and buttery; but, with every process he could use, it still has a sharp, vinous flavor.

Mr. H. E. Hooker, of Monroe, says he ripens them exactly like the *Baldwin* apple. Keep the barrels out of doors until freezing weather; then carry them into the cellar, and about the last of December the fruit will be nice. Young trees of the *Glout Morceau* do not bear as good fruit as when older.

P. Barry.—The tree needs age to bring out the real excellence of the fruit. The *Glout Morceau* would bear good-flavored fruit by the time it was ten years old, "in any place except Buffalo." (Laughter.)

Prof. Coppock.—Some of the pear trees set out in Erie County had not been good nursery trees, but were refuse stuff, which, although sold at what was called cheap, were found to be dear, because the things were worth nothing. The Professor bought some of them, and was happy to say they were almost almost all gone. Purchasers of fair nursery trees were successful; and he would assert that dwarf pear trees grew in Buffalo about as well as any where else, after all. He knew of a great many fine trees growing in the gardens of Erie County.

S. H. Ainsworth, of Ontario, has a quantity of *Vicar of Winkfields;* ripens them as late as he can on the trees; keeps in a cool room until he wishes to perfect them, which he does in a warm room, in drawers covered with cloth.

Benj. Fish, of Monroe, wrapped his *Vicars* in paper, and laid them in a dark closet, in an upper room with a cool atmosphere. Ripened in December, as nice as any pear.

H. E. Hooker.—No process of ripening will make a good pear out of a poor one. Have the fruit well matured upon a well-cultivated tree, and it will not be difficult to ripen it nicely.

THE CURCULIO.

Dr. Spence, of Yates, introduced a subject which was quite fully debated at the meeting in June last—*The Curculio.*

Prof. Coppock had tried the sheet and shaking process, and produced an abundance of plums—four or five bushels to a single tree.

J. J. THOMAS, of Cayuga.—The jarring must be done every day—early in the morning—and faithfully done.

S. H. AINSWORTH.—One year tried the assafœtida and tanners' oil remedy, and the trees were loaded with fine fruit; but it killed the trees as well as the curculio. No process is of any avail, unless thoroughly attended to. Once killed (by the sheet and shaking) fifteen hundred curculios from twenty trees in one forenoon, and finally was compelled to hire a thoughtless neighbor to cut down trees where the pests were breeding, in order that he (AINSWORTH) could have fruit.

Mr. MAXWELL, of Ontario, reported the burning of leather upon pans of charcoal as sometimes effectual.

L. BARBER, of Ontario, once had the hen fever, and while he kept fowls had plenty of fruit. Killed off his Shanghais, and had no plums. Smoked leather, tried tobacco, burnt grease, fumigated the rascals all he could, and still they took all the fruit. Tried the chickens again, and at once had fine plums.

P. BARRY.—There are many cases where pigs and chickens cannot be kept under the plum trees, and then we must use the sheet and shaking remedy. Raises from fifty to sixty sorts of plums, nectarines, &c., by thoroughly jarring the trees every morning, and killing the curculio.

L. B. LANGWORTHY, of Monroe.—Nothing is very good but shaking the insects into a sheet, and killing them afterward.

FIRST DAY—AFTERNOON SESSION.

The President delivered his annual address (which will be published by the Society). The following officers were appointed for the ensuing year:

President—BENJAMIN HODGE, of Buffalo.

Vice Presidents—J. J. THOMAS, Union Springs; W. BROWN SMITH, Syracuse; Prof. W. R. COPPOCK, Buffalo.

Secretaries—C. P. BISSELL, Rochester; JNO. B. EATON, Buffalo.

Treasurer—W. P. TOWNSEND, Lockport.

Executive Committee—P. BARRY, Rochester; JOHN J. THOMAS, Union Springs; C. L. HOAG, Lockport; W. B. SMITH, Syracuse; JOSEPH FROST, Rochester.

The Business Committee reported subjects for discussion as follows:

1. *Cultivation of Apples.*—How many varieties should be embraced in an orchard of 1,000 trees, to secure the largest profit of orcharding in Western New York?
2. Which are the most profitable varieties for an orchard of 1,000 trees?
3. *Cultivation of Pears.*—Which offers the surest and greatest profit in extensive orcharding, Autumn or Winter Pears, or both?
4. How many and what varieties should be embraced in an orchard of 1000 trees, to insure the greatest degree of success and profit?

The following questions apply to the cultivation of both Apples and Pears:

5. What season, fall or spring, is most advantageous generally for planting extensive orchards?
6. What is the most favorable condition of soil, both as regards quality and previous cultivation?
7. Is the application of manures or compost necessary at the time of planting; and if so, what kind?
8. How often, and in what quantities, should manure be applied to orchards to secure the best results, both as to tree and fruit?
9. What are the advantages or disadvantages of root-grafting, in comparison with seedling-stock-grafting, with reference to growth, durability, and productiveness?
10. What process of manuring, if any, is best adapted to the pear and apple, after coming to the period of producing fruit, and at what depth should they be planted?
11. What period of time is required to perfect the fruit bud from its first inception to its ability to produce blossoms?
12. What is the experience of this meeting as to the present or final result in the success of dwarf pears?
13. *Grapes, &c.*—Is grape-culture, for wine, profitable north of the latitude of New York city? If so, what varieties will make the most and the best wine to the acre?
14. Which grape juice becomes good wine with least care, attention, and expense?
15. What sorts of grapes are best to grow for other than wine purposes north of the latitude of New York city—*i. e.*, best as to their productiveness, hardiness, and time of maturity?

CULTIVATION OF APPLES.

Questions 1 and 2 were taken up.

L. B. LANGWORTHY.—We are speaking of one thousand trees, and, of course, want market fruits. Although the *Baldwin* is far from being our best apple, yet it sells well, and I would have five hundred *Baldwins*. Of *Fall Pippins* we have never enough, and I would have five hundred *Fall Pippins*.

Dr. SPENCE.—In Yates County the *Fall Pippin* is a shy bearer, and not a first-rate keeper. The *R. I. Greening* and *Baldwin* always bear and always keep. The *Tompkins County King* is good early in the fall, and from the first of December to the first of April, is a very favorite apple with buyers. It is an abundant bearer, is superior to the *Baldwin*, and is a fine, large apple.

J. J. THOMAS, of Cayuga, did not wish to be confined to two or three sorts. Some sorts will succeed in some seasons, and some in another. Of a dozen sorts, some will be sure to succeed, and we shall have plenty in each year. The three sorts named by Dr. SPENCE are best for two-thirds of any one thousand apple trees.

H. E. HOOKER endorsed heartily the remarks of Messrs. THOMAS and SPENCE as to sorts. Would add *Twenty Ounce*, or *Cayuga Red Streak*. Any buyer will take it first. It is very productive, ripens in all November and December, and takes the place of the *Fall Pippin*, which, though unequaled for quality, is a poor bearer. Would also add the *Tolman Sweet*. The growers in Wayne County say they have no better sort. It ripens from the first of December to the first of May. Would add the *Roxbury Russet* for late keeping.

Mr. L. BARBER would, for East Bloomfield, plant five hundred *Baldwins*, two hundred and fifty *Roxbury Russets*, and two hundred and fifty *R. I. Greenings*.

Mr. STONE, of Oswego, would remind the members of three kinds of cultivators—first, amateurs; second, family cultivators; and third, market orchadists—and we are only recommending such fruits as are best for the latter. Would add *Lowell* and *Wagener*. The latter is prolific and handsome, and is an admirable cooking apple.

Mr. ELLWANGER, of Monroe, added *Sweet Bough* and *Red Astrachan*.

T. G. YEOMANS, of Wayne.—The requisites are, the tree must be a good grower, and a good bearer; fruit of good quality, and so firm as to be carried to distant markets without bruising or damage.

The *Baldwin* never fails to fruit well, when any thing else bears. Of the one thousand trees, would have nine hundred and ninety-nine *Baldwins*, and the other one a — *Baldwin!*

Mr. FISH would have at least ten varieties.

W. B. SMITH, of Onondaga, would have all *Baldwins*, because it is the greatest bearer, produces most fruit in a given time, and the trees are uniformly healthy and vigorous.

Prof. COPPOCK. — In the country, would have the *Baldwin* and *Greening;* living near the city, he wanted early apples — the *Keswick Codlin*, *Early Harvest*, as well as the *Red Astrachan*.

Mr. BARRY. — From *Baldwins* the most profit is made, generally speaking; but an orchard is a great investment — an investment (if well made) for two life times — and it is better to have trees not bear quite as early, than to have them wear out so early. Would have five sorts, at least.

H. N. LANGWORTHY, of Monroe. — It would not appear well for this Society to recommend only one or two sorts — the taste of purchasers would get cloyed. Would have ten or twelve varieties.

Quite a discussion sprung up as to the merits and value of the *Northern Spy* — some not thinking very highly of it, and others remarking: "I do say and repeat, that the *Northern Spy* is the finest apple that ever was grown, to my taste. Have seen crops sent from here to every part of the Union, and lauded to the skies. As to its delicacy of skin, ten barrels were carried to Milwaukee from Western New York last winter, and arrived in fine condition." "If the tops of the tree are spread by proper trimming, and the fruit is thinned so the tree will not bear too heavily, the fruit is of enormous size, high colored, and very fine. The tree will bear every year."

Members balloted on questions 1 and 2 as follows: Two voted for all *Baldwins;* five voted for five hundred *Baldwins*, and balance made up of *R. I. Greenings*, *Roxbury Russets*, *Northern Spies*, *Twenty Ounce, and Tolman Sweet;* while the remaining votes were from two hundred to four hundred *Baldwins;* each voter making his number up to eight hundred or nine hundred from the above-mentioned varieties, and filling in the balance of the thousand with some particular favorites of the voter.

EVENING SESSION.

CULTIVATION OF PEARS.

Question 3. — After remarks by some half dozen or more members, it was found that no difference of opinion existed, and, at present, Autumn Pears were most profitable.

Question 4 was not balloted upon, as in the present state of our knowledge we cannot be very positive. Remarks by members were very interesting; but we are compelled to pass by many of them, for want of space.

Prof. COPPOCK, nine years ago, put out several hundred trees, part on quince, and part standards. From them had marketed quite a quantity of pears, and they were all from the dwarfs — not any surplus from the standards. Many sorts that are finest on quince roots — for instance, *Duchesse d'Angouleme* — are worthless as standards.

One member realized from one hundred and sixty dwarf trees, two hundred and sixty-two dollars cash in one year.

Statements were made of the profits in Ontario County from standard *Virgalieus*, &c. — trees forty years old — for twenty years, averaging twenty bushels a year, which sold at an average of three dollars per bushel.

Mr. BARRY advised, for dwarf trees, *Duchesse d'Angouleme*, *Louise Bonne de Jersey*, *Vicar of Winkfield*, and *Easter Beurre;* for standards, *Bartlett*, *Sheldon*, *Seckel* and *Lawrence*. It is important to start right, with land well prepared, and with but few varieties, and be sure that those are of healthy, vigorous, good-bearing trees.

CULTIVATION OF APPLES AND PEARS.

Question 5. — Fall planting was strongly advocated by some, because the earth gets sett'ed around the roots, and the trees are ready to throw out new roots early in the spring; but trees can be safely transplanted at any time, when frost will permit, between October and May, if the soil be properly prepared beforehand, and the trees be suitably cared for afterward. All trees are better for banking up around them, when set out in the fall. In spring, there is danger from drouth. But far more depends upon the treatment of the trees at and after the time of planting, than upon the season when they are set out. All trees, and, in fact, all plants, should be heavily pruned back when set out, so that there shall be no disproportion between the top and the roots.

Question 6. — The soil should be well drained; should be deeply and well cultivated; and then even a stiff clay loam would produce good pear trees and pears.

SECOND DAY.

CULTIVATION OF GRAPES.

The suspension of the rules was moved, in order that the following substitute for questions 13, 14 and 15 might be introduced:

"*Grapes.*—What are the best and most profitable varieties, or variety, for general cultivation for market and wine? best distances for planting? preparation of soil, and manner of training, trimming, and cultivating? kind and form of trellis? curing and marketing the fruit, and profit per acre to the successful grower for market and for wine?"

This subject covers great ground, and was quite fully discussed. Any well-drained land that will

grow first-rate corn, will grow good grapes. Another member says, any soil that will bear good winter wheat, will produce grapes. It should be worked twenty inches deep — the deeper the better — and made rich with manure, swamp muck, &c.

Mr. AINSWORTH, who largely cultivated the *Isabella* vine, gave an interesting account of his mode, as follows:

The ground should lie favorably, with southern inclination, and woods to shelter from unfavorable winds. Three hundred and twenty vines to the acre places them twelve feet apart each way. Yearlings, with plenty of roots, are the safest planting, and, as the roots are more fibrous, will, by the third year, produce about ten pounds to each vine — as much as if two years old when set out. Cut back to three buds, and plant as deep as they stood in the nursery. Trellises should run north and south, end posts well braced, and with five No. 8 wires, the lower one a foot from the ground, and the top one six feet. Practices the renewal system.

One member, whose vines had come into full bearing, reported his present profits as at least fifteen hundred dollars per acre — but this is under a high system of cultivation. Other reports were not quite as favorable as this, but none, even of large vineyards, were less than five hundred dollars per acre, net.

Judge LANGWORTHY. — *Isabella* will not make wine to make glad the heart of man — has not enough tartaric acid — is like refined and superior cider. If sugar enough be put in, it will make what the French call *liqueur* — a sort of cordial, but not wine. *Clinton* grapes make a wine with tartaric acid enough to be "wine as is wine."

Dr. FARLEY used to think that good grapes could not be grown on a clay soil, but had found that they could. Cultivates five acres of *Isabella* vineyard. Is now beginning the *Diana*, which is as hardy as the *Isabella*, and, to his taste, is superior to even those celebrated sorts, the *Delaware* and *Rebecca*. Said he: "I had rather eat a *Diana* half ripe, than the best-ripened *Isabella* I ever saw. That the *Diana* is the most valuable grape that we have, is perfectly clear to my mind." The *Concord* grape is almost as good as the *Isabella* — ripens fully two weeks earlier, and holds its fruit well after ripening.

Dr. MINER was full in the faith of the *Diana* being one of the best grapes, both for abundance of bearing and for the table. Wherever the *Isabella* will not ripen, the *Concord* is valuable.

Dianas are very sweet, without much pulp, and, in the language of a member, are "perfect bags of juice." Therefore, they promise to be a most valuable wine grape.

PRUNING DWARF PEAR TREES.

On motion of Prof. COPPOCK, the subject of Pruning Dwarf Pear Trees was now taken up, and Messrs. YEOMANS, of Wayne, and BARRY, of Monroe, gave very interesting practical illustrations, with the tree before them. But as our readers can find this, with engravings, on pages 45 and 46 of the *Rural Annual* for 1858, we omit the full report.

CULTIVATION OF APPLES AND PEARS.

On motion of H. N. LANGWORTHY, the Society returned to the regular order of subjects, viz.:

Question 7. — Mr. HOOKER would not allow manure to touch the roots of trees when planting, but applies it to the surface of the ground, and the rain will carry the soluble matter to the roots, while the balance acts as a mulch, preventing bad effects of severe frosts or drouths.

Messrs. LANGWORTHY, SMITH, BOARDMAN, RANNEY, COPPOCK, MATTISON, and others, concurred with Mr. HOOKER as to the injurious effects of fresh manure upon the roots of young trees.

E. BOARDMAN covered a piece of land with a heavy coat of manure, which he plowed in, and then planted trees, and three-quarters of them died.

Question 8. — Mr. MATTISON, of Monroe, has always seen that when a farmer wants a fine calf, he feeds it. Equally necessary is it to an orchard to feed the trees and make them fat. As to how often to apply the manure, and in what quantities, each man must judge — only keep the land in good heart, and cultivate it well.

Another member said no crops should be grown on the land of the orchard; but to sow clover, and plow it in while green, was a capital mode of manuring.

Question 9. — There seemed to be no difference of opinion — all grafting should be seedling stock grafting, and the roots of old trees should never be used. But the theory of *Terra-culture* COMSTOCK as to the collar of the plant being the seat of life is exploded, and a seedling stock can be divided into two or three parts, and used with success in grafting scions. Experiments had been tried, and no difference was seen as to "growth, durability, or productiveness."

Question 10. Apply the manure in any way so that its soluble portions can come to the roots *through* earth; apply over the whole orchard, or to a large area around each tree. Members who had tried liquid manure quite thoroughly, were now rather out of conceit with it.

The hour for adjournment having arrived, Mr. SMITH, of Onondaga, moved that the next meeting be held at Rochester. Passed, in spite of the efforts of several Rochester gentlemen, who wished it held at Buffalo next June. Adjourned.

JAPAN APPLE-PIE MELON.—I have grown this melon the past summer, from which excellent pies are made, hardly to be distinguished from good apple pies. It is as easily grown here in Illinois as the cucumber, and produces abundantly. It is an invaluable addition to our list of vegetables, as it will keep all winter, if free from frost, and is ready for use at any time. W. H. GARDNER, *Sublette, Lee Co., Ill., January*, 1859.

NOTES FROM PENNSYLVANIA.

Eds. Genesee Farmer:—As another winter has set in, I will send you my annual report of crops and prospects, to be placed on record.

We have had some drawbacks in the shape of wet weather and drouth, but on the whole we have little reason to complain. Hay was well secured—a fair crop; wheat a light crop but of good quality; oats very light—not more than one-fourth of a crop; corn good and well matured. The small fruits—such as the currant, raspberry, strawberry, and blackberry—were good, though some of them were injured by the hot sun and did not mature well. Apples, pears, peaches, and plums, were almost a failure; there were but few specimens, and most of those were imperfect. Of grapes, the crop was fair—not abundant, on account of the rot. My *Black Hamburghs* and *White Muscat of Alexandria* have done very well, and I feel elated with my little cold vinery. I would advise every farmer who has a place of his own, to build one. It may be used to start early vegetables; and then the luscious grapes which can be raised at so slight expense, amply reward the outlay. My vinery, which is sixteen feet long, and covered with four hundred feet of glass, cost me only about *thirty-three dollars;* and I intend to enlarge it this winter, if possible.

The wheat now on the ground looks very promising, and is thus far, I believe, free from insects.

Chester Co., Pa., Dec., 1856. B. F. B.

Can not our correspondent furnish a brief description of his vinery? It is difficult to understand how one can be built at the cost he names, allowing nothing for his own labor. Eds.

LARGE PEAR AND APPLE TREES IN ENGLAND.

A correspondent of the *Gardener's Chronicle* gives a description of some large Pear trees near Gloucester, an extract from which may be of interest to the readers of the *Genesee Farmer:*

"In one orchard there are now growing 10 sound perry Pear trees, whose average circumference three years' ago, at between 2 and 3 feet from the ground, and below the graft, was 9 feet 4½ inches, but taking the three largest trees separately, above 11 feet; the circumference of the largest tree was 11 feet 3 inches, that of the smallest (of the whole number) 7 feet 4 inches, and they are all of them of the very fullest height and span, the span of the largest being 60 feet. A few years ago the largest branches of the largest trees, for a sadly fallacious reason, were cut off, before which unjust treatment they produced an averaged crop of a ton of Pears, of the noble kind called *Huffcap*, the flavor of which though rough and wild is full of fine aroma; but one of them, and not the largest tree, is known to have yielded in one season 2 wagon loads—20 sacks—100 bushels—2 tons—4 hogsheads of perry. Apple trees are so much smaller than Pear trees that it takes an Apple tree of the largest size to produce a hogshead of cider; but they will often reach that size, and I was told that a farmer in the west of England laid a wager that he would produce from 30 of his Apple trees as many hogshead of "Apple drink." A great deal may be said that has not yet been said about perry Pear trees, their enormous size and vast longevity, their freedom from canker, and where the soil is drained, apparently from all disease; the tendency of their branches when they have reached a certain height to split at the fork, "from the oppression of their prodigal weight," and the chains and wooden frames with which they are then supported, and which at length become embedded in the living trunks that embrace and close over them, without any fretting or loss of health, or injury to their growth; the great size at which they are cut down nearly to the ground, and the trunk being stuck around with numerous grafts; the vigour with which they will grow again and form a second tree of still greater dimensions, to the almost complete obliteration of the process that they have undergone, their tendency, where the soil is wet, to run to stem and branches, with no small twigs and a very few leaves."

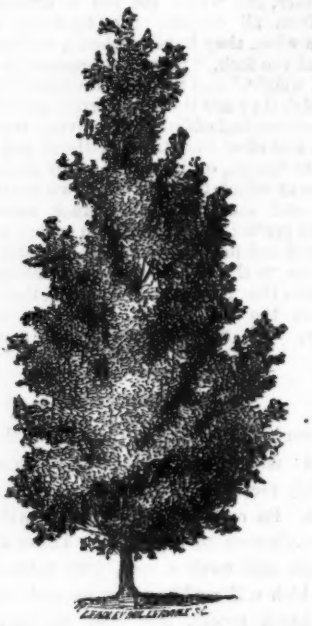
A BEAUTIFUL OAK.

No country is so rich in varieties of the Oak as America; and yet, while all admit its great beauty, it is rarely met with, even in our best ornamental grounds. Its comparatively slow growth induces ordinary planters to neglect it. Those who build on a bare and treeless spot, very naturally plant trees which will rapidly grow up and convert its bleak, harsh aspect, into cozy mellowness and beauty. But while this is desirable and proper,—while it is good to plant for immediate effect,—the future should also be borne in mind.

Two or three Oaks should have a place in every collection of ornamental trees. They please the eye with their charming variety, even when young, and will be objects of great beauty when the rapid-growing trees have passed away. Downing well says: "As an ornamental object, we consider the Oak the most varied in expression, the most beautiful, grand, majestic, and picturesque, of all deciduous trees."

The entire tree or shrub of every species of Oak is highly ornamental—the least so, perhaps, are the willow-leaved Oaks, and the most so, the lobed and deeply sinuated leaved kinds. The foliage, even of the same species, and more especially of the deciduous kinds, varies exceedingly; not only on different individuals, but on the same individual at different seasons of the year. In spring, the leaves of many of the deciduous kinds are small, delicate, and beautifully tinged with yellow and red; in summer, they are broad and green; and in autumn, coriaceous, and of a russet brown, scarlet, or blood-red color. In form and outline, the Oak has greatly the advantage over other trees in point of character and variety.

We annex a cut of the Upright-growing Stalk-fruited Oak, which Bosc describes as the "handsomest of all the Oaks for ornamental landscape." In general form, it resembles somewhat the Lombardy Poplar.



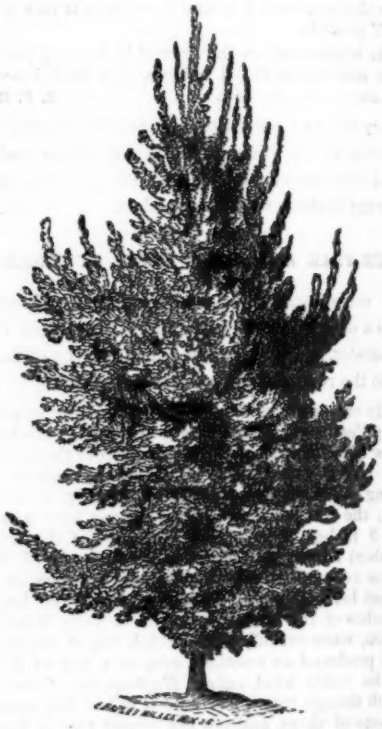
UPRIGHT-GROWING STALK-FRUITED OAK — QUERCUS PEDUNCULATA FASTIGIATA.

TREES FOR AVENUES.

It is reported that the Royal Commissioners for 1851 are about to plant their three great roads, viz., Exhibition Road, Cornwall Road, and Prince Albert's Road, with Lime trees. Notwithstanding the beauty of this tree, we can not but hope that the statement is erroneous, and that an opportunity will not be lost of showing what effect can be produced by something less hacknied. Surely it will be highly discreditable to this, the greatest horticultural country in the world, if nothing more can be found for avenues than trees employed in the days of the Tudors. For forty years, very large sums have been annually spent in procuring new hardy plants from every accessible climate; and it will reflect little credit upon the advisers of the Royal Commissioners, if they should prove so poor in resources as to have in 1858 nothing better to recommend for avenues than might, indeed, have been had at the Conquest.

What is required for avenues near London? Trees that are durable, have handsome foliage, that grow fast, that will bear occasional winter fogs and the long east winds that prevail here in the spring. The handsomest, the fastest growing, and the latest in leafing because the least likely to suffer from cold north-east winds, are the best for this purpose. Elm trees, Lime trees, and Beech trees, are most in use, because they were the trees of our forefathers, and people in country places, when avenues were made, even if they had had other trees, would not have thought of looking beyond what they could find in their own neighborhood. But that Elm trees and Lime trees have formidable rivals is sufficiently proved by the glorious Horse Chestnuts of Bushy. Avenues of Horse Chestnuts at Kensington would indeed be far preferable to Lime trees, if we must trot along at the pace of pack-horses.

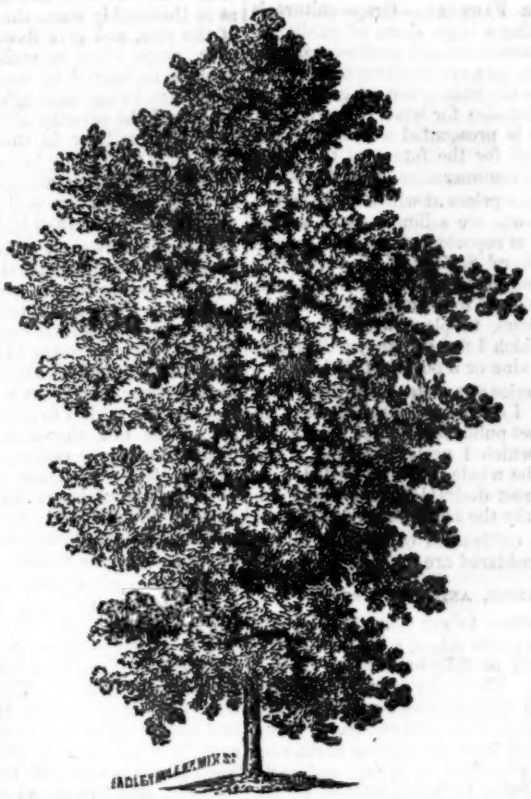
But are we to disregard everything that modern experience has shown to be suitable for avenues, except the trees just mentioned? Have North American Maples no merit, nor Sweet Chestnuts, nor Oriental Planes, nor any of the Oaks, nor the glorious Tulip trees, nor graceful Ailanths, nor the noble Black American Walnuts? Surely, among these something may be found more worthy the Royal-Commission-roads than Elms, Beeches, Limes, and even Horse Chestnuts. Elms indeed are not to be thought of; it would never do to plant by roadsides trees so rotten in their old age as to be dangerous to passers by. The experience of Hyde Park is a warning. Nor would Beeches answer, because of their invariable secretion of



TOOTH-LEAVED TURKEY OAK, OR FULHAM OAK — QUERCUS CERRIS FULLAMENSIS.

honey dew, which would gum London soot to their leaves and speedily throw them out of health.

It may be asked why Spanish Chestnuts are not selected, trees far more beautiful than Lime trees, both in foliage and flower, graceful in youth, majes-



THE TULIP TREE — LIRIODENDRON TULIPIFERA.

tic in old age, and possessing every quality that is required. True Sessile-fruited Oaks, among the finest of trees, will bear London atmosphere, and might be associated with Spanish Chestnuts alternately. Oriental Planes, than which none are hardier, none more umbrageous, none better suited to our Parks, with good management will grow much more than a foot a year in height, and endure for ever. These things are well known to all men.

Among less common species, there is the Acer eriocarpum, commonly called Sir Chas. Wager's Maple, one of the fastest growing of American trees, remarkable for its airy foliage, light green in spring, rich rose color in autumn. With it might alternate the Acer macrophyllum of Oregon, a specimen of which in even unfavorable ground has made nearly two feet in height annually, and has now, at the end of about 28 years, a girth of six feet. Nothing could be more striking than the massive deep green foliage of the latter associated with the lighter shade of the former.

Are Turkey Oaks to be passed by? They grow faster than the Lime, and, owing to the thinness of their foliage, are exceedingly graceful.

Then there are Tulip trees. Let any one look at the specimen on Ham Common, and say whether such magnificent vegetation is to be disregarded. A Tulip tree in land no better than that of the Cornwall Road, grows as fast as any Lime.

Above all things, we should regret to find the claims of Ailanthus and the American Black Walnut passed by. These trees are so much alike in general aspect, that they may be spoken of together. Each will grow as fast as the fastest Horse Chestnut; has noble, rich, green, pinnated leaves; and the first, in good seasons, is resplendent with crimson fruit. Surely they deserve to be thought of.

Were each of the three avenues now to be planted furnished with its own peculiar trees, two sorts in each case planted alternately, an admirable effect might be obtained by some such arrangement as the following:—Cornwall Road, Tulip trees alternating with Acer eriocarpum; Exhibition Road, Black Walnuts and Acer macrophyllum; Prince's Road, Turkey Oaks or Sessile-fruited Oaks and Spanish Chestnuts. If it should be said that such trees, of the requisite height, are not procurable in England, we have two answers. 1. There are more nurseries than the English; the Continent and United States are within easy distance. 2. Let the planting be deferred until trees of the requisite height can be raised in nurseries under a contract to supply them at a future time.—*London Gardeners' Chronicle.*

CULTIVATION OF THE GRAPE.—No. 1.

EDITORS GENESEE FARMER:—Grape-culture is at this time attracting a large share of public attention. Not only amateurs and professional fruit growers, but farmers, also, are devoting much time, labor and capital to the cultivation of grapes, not only for table use, but also for wine. The trial of the newer varieties is prosecuted with a care and zeal that argues well for the future of this most luscious, certain and remunerative of all fruits.

The almost fabulous prices at which some of the newer and better sorts are selling, as well as the profits of the crop, as reported at the last session of the "Fruit Growers' Society of Western New York"—varying from five hundred to fifteen hundred dollars per acre—are inducing many, and some hitherto only amateurs, to plant with an eye to profit; a result at which I feel sure they will arrive, if they never *sell* a vine or a pound of fruit.

As you desire a series of articles upon the "Culture of the Grape," I offer you the substance of an article on that subject published in your *Rural Annual* for 1858, to which I propose adding a few explanatory cuts; the whole to be succeeded by a description of the most desirable of the newer varieties of grape worthy the attention of cultivators.

In the successful cultivation of the grape, the first points to be considered are

SOIL, SITUATION, AND EXPOSURE.

Perhaps it is needless to say that the best site for a vineyard is the south side of a hill, where the vines at mid-day will be fully exposed to the full influence of the sun. There the vines will get the proper sunshine and light so necessary to the full and healthy development of leaves and fruit. They will there be sheltered from the chilling north-east winds sometimes so prevalent in spring and early summer, and very liable to bring mildew to the young and swelling fruit in the month of July. A south-eastern exposure is also good, because it receives the sun pretty early in the morning, and is exposed until late in the afternoon. A full east exposure is not so good, because it is exposed to eastern winds; and the vines are very liable to injury from late spring frosts, the sun coming upon the vines so suddenly as not to give them time to thaw out gradually. It is well known that tender vegetation, slightly frozen in the spring, if thawed out in the shade, receives little or no injury; but when exposed to the sun to thaw out suddenly, is almost sure to be killed. A full east exposure also loses the sun too early in the afternoon. A western exposure is still worse, from its receiving the sun so very late in the afternoon, and is liable to suffer from chilly evening dews. It is also more liable to suffer from west winds and driving storms.

Hill-sides, or elevated ground where the soil is naturally dry, warm and deep, is absolutely necessary to the well-being of the vine. It not unfrequently happens that high ground is very springy and wet, but such places are usually very readily underdrained.

Grape vines can not thrive long in low, wet, cold situations—the roots are apt to canker and rot, and the grapes are liable to be affected with the wet-rot, and are invariably watery, insipid, and of poor flavor, and *never* make the *best* wine. In such places, the sun's rays hardly ever fall upon the vines with full force and in the proper direction, so as to thoroughly warm the soil and ripen the wood of the vine, and give flavor to the grape. Moreover, grape vines in such localities are far more liable to be heaved by severe winter freezing; the wood not being thoroughly ripened, is unable to withstand the severity of the winter, and also more subject to mildew in summer; and, in addition, they must necessarily be more liable to the depredations of injurious animals, such as mice, musk-rats, &c., as they are well known to frequent low, wet places, rather than high and dry ones.

There is, however, a great difference between the foot, the middle, and the summit of a hill. The top of a hill is very frequently too exposed to the cold north winds; and moreover, is frequently too stony and poor, all the organic matter having been washed down on to the hill-side and into the bottom. The foot of the hill, not receiving adequately the full force of the sun's rays during the day, is more or less subject to late spring frosts. The middle of the hill, therefore, is the best; the fruit comes to maturity earlier, and has a longer time to more perfectly ripen, and is, consequently, more fit for wine, and of better flavor for the table. The wood of the vine, also, is more thoroughly ripened, and is, therefore, better enabled to withstand the inclemency of the winter.

The vineyard should not be located very near low, wet woods, large ponds, swamps, lakes marshes, &c., as such places always generate fogs and mists in the latter part of summer and early fall, just when the dryest atmosphere is wanted for ripening the grapes. There should not be large hills, high trees or large buildings near enough to cast a shade upon the vines. Nor should vineyards ever be made in deep gullies, valleys or ravines. Such places always cast much shade morning and evening, and create whirling currents of wind, which collect much snow in winter, which is liable to break down the vines. They also harbor all kinds of noxious animals, such as mice, &c.

The quality of the soil, also, is of the utmost importance. The grape vine will live, it is true, where any other hardy shrub will grow; but if planted in cold, wet, stiff, clayey soil, it cannot thrive many years, and the grapes, if they ripen at all, will be watery and insipid. The only way in which such a soil can be made fit for the grape vine, is by mixing with it great quantities of marl or lime mixed with sand, or like quantities of sandy loam, and by thorough draining. The opposite extreme, however, of light, sandy, poor soils, unless well mixed with clayey marl, turfy, loamy sods, lime, or decomposed vegetable soil from the woods, is also bad. The most suitable soil, is that deep, rich, loamy, gravelly, porous and well-drained soil, well mixed with lime and gypsum, such as we see so much of in Western New York. In fact, any soil that will grow first-rate winter wheat, will grow grapes. The best situation, therefore, is the south side of a gently-rising hill, well sheltered all around on the north and north-east by some higher hills or distant woods.

It may so happen that a gentleman may want to plant a vineyard who has not the desired kind of soil. I would then say, choose the best you have, and add the necessary constituents to make it good.

Every man who has a rod of ground should plant a grape vine, and plant as many as he has room for, or can afford to plant. No other fruit-bearing plant will so well repay any one for care or neglect. Its abundance of luscious fruit is as easily kept fresh through the winter as any other fruit, and it makes excellent preserves, and is easily manufactured into wholesome wine.

PREPARATION OF THE GROUND.

There are but very few vineyards properly prepared in America. Labor is so very high in this country, as to make it seem almost out of the question to properly prepare a vineyard. There are very few gentlemen in this country wishing to plant out a vineyard, who have the courage to lay out for labor seventy-five or one hundred dollars per acre, for trenching and turning up the soil alone. And yet it is absolutely necessary to the thrift and longevity of the vines, that the ground be trenched and broken up three or four feet in depth. In Europe, many of the best vineyards are trenched to the depth of three, four, and even five feet. The ground is trenched the fall previous to planting, and not unfrequently has been prepared by seeding down with clover two or three years preceding the time of trenching, and has had one or two good coatings of gypsum and manure.

Should the ground be at all wet or springy, it will be absolutely necessary to thoroughly underdrain it before planting. This is, perhaps, best done before the trenching or plowing. The main drains should be laid thirty, forty or fifty yards apart, according to the state of the land, whether it be very wet, or only a little springy. The main drains should be laid up and down the hill, coming out into an open ditch at the bottom of the hill. The cross drains should run diagonally down the hill into the main drains, and be laid about nine yards apart, and sunk to the depth of three and a half to four feet. This running down the hill gives an impetus to the water that will clear out any sediment that may collect in the pipes.

Few persons are fully aware of the importance of thorough drainage as a means of meliorating the soil, and none but those who have witnessed its results can fully appreciate its great benefits. By draining, the soil is kept from being too wet, and also preserved from the ill effects of severe drouth — it is warmed by the summer showers, which, instead of running off over the surface and washing away the soil, soaks to the bottom of the loose earth, and the superabundant water is carried off through the drains, leaving its rich gases, which have been collected in falling through the air, in the soil for the young absorbents of the plants. In excessive dry weather, moisture is drawn from the depths of the soil by capillary attraction, thereby keeping it moist to the very surface, and preserving the plants in health and vigor in the most protracted drouths. Where ground is thoroughly drained, plants are not so likely to be affected by winter heaving; the soil becomes dry and warm much earlier in the spring, and the plants commence a vigorous root action one or two weeks before the buds begin to burst; they are thereby better enabled to force and sustain a more vigorous growth of foliage when it does start; the wood becomes more thoroughly ripened in the fall, and is better fitted to stand severe winter freezing.

The ground intended for a vineyard should receive a good manuring the year previous to planting, to be turned in and thoroughly mixed with the soil in the trenching — either a good coating of lime, where that kind of manure is wanting (which will not be if there be much lime rock in the soil), or a good application of gypsum, where it can be had, or a good coating of barn-yard manure, decomposed vegetable mold from the woods, turfy sods, the cleanings-out of ditches, street scrapings and sweepings, or a good clover sod plowed in previous to trenching.

When the ground is thus prepared, it will be ready to commence the trenching. Stretch a line across the ground, and mark out a trench four feet wide and the whole length of the piece to be trenched. Then dig out the soil the whole width of the trench, and two to three or four feet deep, according to the depth it is intended to be trenched, and with the teams draw the soil to the opposite side of the vineyard, where the trenching will be completed. This soil is to fill in the last trench at finishing, to complete the work. When the first trench is completed, mark out a second four feet wide, as before. Now dig the surface soil of the second trench to the depth of one foot, or as deep as the best steel spades can be made to dig, setting them as nearly perpendicular as possible. Throw the top soil of the second trench into the bottom of the first; then, with a shovel, scrape up all the loose earth that fell from the spade in digging the first spit of the second trench, and throw it into the first. This done, next dig the subsoil of the second trench one foot deeper, and throw it into the first trench upon the top soil that was thrown from the second. Scrape up all the crumbs, as before, and throw them on top of the subsoil. If the ground is to be trenched only two spades deep, then loosen up the bottom soil with the pick as far as the pick can be sent in, throwing out all the large stones as you work along. If the ground is to be trenched three or four feet deep, this last picking will not be so necessary. If there are large quantities of vegetable refuse at hand, such as grass, weeds, rotten leaves, straw, clippings of hedges, or very small brushwood, it may be thrown into the bottom of the trenches as they are proceeded with. Let this trenching be done well, for remember that this will be the last opportunity you will ever have of doing it; and I apprehend no one will deny that it is always better to have a small vineyard done well, than to have a large one managed badly. It may be objected to by some persons, that the surface soil should be thrown into the bottom of the trench, and the subsoil upon the top to plant the young vines in; but when it is remembered that the young vines will soon root down into the good soil below, and that the surface soil will become better every year by applications of manure or compost and cultivation, I think those objections will soon vanish. Let the third and fourth trenches be done as the first and second, and so on through the piece.

If the vineyard to be trenched be a very steep hill-side, it will require terracing. This is best done by beginning at the foot of the hill. Stretch a line as a guide, and commence by trenching as on level ground. The soil thrown from the first trench will not require to be drawn away, but merely turned over and made level, so as to form a terrace,

or bench. The width of these terraces will depend upon the declivity of the hill-side; and they will require some kind of walling, or sodding, to keep them up, so as to prevent heavy rains from creating currents and washing down the soil. If the ground be thoroughly trenched, there will be found, in most hills, stone enough to do the walling; but where there is not stone enough, the embankments may be kept up by covering them with sods. The embankments should stand out a little at the foot, or falling back towards the hill, so as to prevent sliding down as much as possible, and the sods cut in the form of a rhomb. They then have a mechanical power of holding each other up, which they lose when cut perfectly square; and the trouble of cutting the one is the same as that of the other. To get the sods of the desired shape, stretch a line across the turf to be cut, and make a cut therein with the spade or racer to the depth of two or three inches. Then move the line, and make another cut twelve or fifteen inches from, and parallel with, the first, and so on until a number are cut. Then stretch the line diagonally across these cuts, and at the same distances, and cut as before. This gives the sod the desired shape, and, when put up, all to fit. When laid up, they

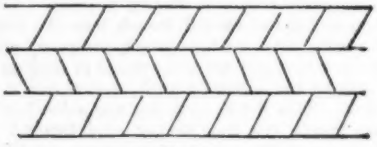


Fig. 1.

will somewhat resemble fig. 1. Should there be any danger of the sods sliding down after this, they can be fastened up with wooden pegs, say a foot long and an inch in diameter, and driven through the sod into the bank. But sods are not as good as stones; the grass tends to create damp during the night, and its roots growing in the bank absorb a great deal of moisture and nourishment from the earth that properly belongs to the vines. Stones do not do this, but they absorb a great deal of warmth from the sun during the day, and give it off slowly during the night, thereby tending to keep the earth and atmosphere warmer through the night. These walls, if properly laid up, will last as long as the vines. And if the trenching be thoroughly done, and the vines carefully managed, I see no reason why they should not continue to thrive and be remunerative for a hundred years; since we know there are vines still in existence upwards of two hundred years old, and bearing nearly a ton of grapes to a vine every year — among which is the large *Hamburgh* vine at Hampton Court, near London, England, which frequently bears from two thousand five hundred to two thousand six hundred bunches, weighing from one thousand six hundred to two thousand pounds — although it can hardly be expected such vines will be grown in the open air.

There are other modes of preparing the ground than trenching with the spade. The next best is to plow the ground with a large plow, and follow in the open furrow with a subsoil plow, thereby breaking the ground to the depth of eighteen to twenty-four inches. Next to subsoiling, will be good, deep plowing; and next to that, merely digging large holes, and planting in a good compost mixed with the soil out of the holes.

The trenching, as first recommended, in ordinary soils, will cost from seventy-five to one hundred dollars per acre; and trenching two spades deep, without throwing out the loose earth, about fifty dollars per acre. The plowing with large plows and heavy teams, and subsoiling, will cost about twenty-five dollars per acre; and merely digging holes, or good plowing, will cost from ten dollars to fifteen dollars per acre — but this will depend on the character of the soil, and the number of holes to be dug.

The best time to prepare the ground is in the fall previous to planting in the spring. This should be done in fine, open, dry weather; for when done in wet weather, the ground becomes trodden into slimy, pasty clods, which, in some soils, when they have become dried and buried beneath the surface, are almost impervious to air and water. And the ground should be left in as rough a state as possible all winter; for the rougher the soil, the greater will be the surface exposed to the atmosphere to be acted upon and pulverized by the winter's freezing, and enriched by the rich gases and salts which have been collected by the rains and snows, in winter, in falling through the atmosphere.

Rochester, N. Y., Jan'y, 1859. JOSIAH SALTER.

THE VINEYARDS OF THE RHINE.

The *Scottish Quarterly Journal of Agriculture* contains an interesting article on "Rhenish Wine and Rhineland," a few extracts from which we think will be acceptable to the readers of the *Genesee Farmer*.

The writer visited the most celebrated vineyards on the Rhine, in 1855, and again in the summer of 1857. In 1855, the crop was almost a universal failure, owing to the late frosts in April destroying the fruit-bearing shoots of the vine; while in 1857 the vines were loaded with an exuberance of fully ripened fruit. In 1855, search had to be made among the luxuriant green leaves for a bunch of grapes, and, when found, the fruit proved diminutive and unripe. In 1857, on the other hand, bunch was suspended over and beside bunch in such profusion that surprise was excited that so small a plant as the pruned vine was able to bear so large a quantity of fruit as far to outweigh the weight of the plant itself, and which it could not have done without ample support. Everywhere the grape was presented to the tourist, in inviting bunches of red and white, at the low cost of six kreutzers (four cents) the bunch. The writer states that he ate grapes grown in the open air on the banks of Lake Como "of much finer fragrance than from any vinery in the United Kingdom."

"In every respect the vine is a remarkable plant. No one could anticipate, on first seeing a vine-plant

without leaves, that its dry, withered, wiry stem, could produce elegantly-formed expansive leaves and beautiful bunches of fruit of large size and weight, suspended as they are from the most frail-looking tendrils; but, notwithstanding its shrivelled aspect, the vine is a plant exceedingly susceptible of external influences. Color, size, form, taste, aroma, productiveness, vary in a remarkable degree with a change of soil, position, and temperature. It is, therefore, no matter of surprise that the grapes of the sunny side of Johannisberg should be very superior in flavor to those of the north-facing slopes on the opposite bank of the Rhine."

The practice of concealing the bunches of grapes from the direct rays of the sun, behind screens formed of growing leaves, and at the same time leaving them open to light, was quite common. The direct rays of the sun foster by their *heat* the acid principle of the grapes by increasing the amount of tartaric acid; and it does so more decidedly in the red than the white grape, because the dark color absorbs the heat more readily; while the *light* of the sun, passing easily through the white skin, evolves the saccharine principle in the white grape in a greater degree than in the red, and thus brings each kind ripe nearer at the same time—an important point in wine-making. Protection from the direct rays of the sun also improves the flavor of the fruit.

Fetid manures exercise a very prejudicial influence on the odor of the wine; while such as are inodorous and decay slowly, such as wool, horn, and bone-black, conduce very much to enhance its fragrance.

"The leaves of the vine, which contain a considerable quantity of alkali, constitute an excellent manure for the plant. At the vintage, only the fruit is removed from the vineyard; and when the leaves fall to the ground, their constituents necessarily compose the best manure for future vine leaves. Only in this manner can the fact be explained that the vine requires little inorganic manure, and often contents itself with substances which it obtains principally from the weather-beaten rocks on whose slopes it is planted."

We believe it is now conceded that grave vines are not particularly benefited by the application of inorganic manures, such as potash, soda, etc. It is only one of many facts going to show that the composition of any particular plant is no certain indication of the kind of manure most needed for its growth. Potash enters largely into the composition of the wood, leaves, and fruit of the grape; and therefore it has been supposed that its cultivation would soon exhaust the soil of potash. But while it is true that nearly one half of the ash of the entire grave vine is potash, yet the growth of grapes does not remove from an acre of soil so much potash as many of our farm crops. Potatoes, turnips, etc., remove nearly double the quantity that grapes do, and yet even these plants are not particularly benefited by the application of potash as a manure. Manures rich in ammonia and phosphoric acid appear to be best suited for the growth of grapes.

"The full ripening of the fruit by the action of the sun is of the greatest importance in order to secure good wine. On this account the vines are not allowed to grow high, but the nearer they are kept to the ground the better, in order that the heat of the sun may be reflected back upon them from the ground, and the process of ripening is then carried through the evenings and nights by the warmth which is radiated from the earth. The vines are not kept short to obtain a greater quantity of grape-juice, for those which are allowed to grow six feet and upward yield a larger quantity of juice, but their wine is worse than from the short vines in the same place."

The Agriculture of the Rhineland, says the same writer, has improved amazingly of late.

"A few years ago, the land was generally in a very foul state with weeds; now it is much cleaner, and now also the manure is applied in large quantities. The manure is all from the farm-yard, the stock being constantly kept in the homestead. The crops are mostly of rye and oats, the rye affording the ordinary food to the population, and the oats to both man and beast. Wheat is now raised in increasing quantities, and so is barley. Red clover is cultivated with success as a forage plant. The peculiar crops are mangel wurzel, kohl rabi, scarlet clover, and Indian corn, all of which grow luxuriantly. Potatoes are largely cultivated, and ruta baga may frequently be seen. But the most striking feature in the change of Rhineland agriculture is the great extension of the cultivation of fruit trees. These are not planted in masses like our orchards, but along the highways, and at stated distances in rows in the cultivated land. The ordinary fruits cultivated are apples and pears, both for eating, though the old apple trees had been planted for the purpose of making cider. Cherry trees are common, and so are walnut; but the increasing culture in fruit is in plums, and of these the *Mirabelle* seems the favorite. This is a small, somewhat oblong, yellow-colored plum, sweet to the taste, and capable of being eaten ripe, or preserved for compôtes. The trees are pruned so as to allow the plowing under the lowest trenches. A new orchard of *Mirabelle* plums, consisting of five thousand trees, has lately been planted in the neighborhood of Kronthal; and on surveying the country from the heights, it is fast being covered over with fruit-trees, which, in addition to the forests which are raised for fuel, will ere long give it a wooded aspect.

Plants breathe. The respiratory organs are in the leaves—the upper side inhaling and the under side exhaling. This can be seen by applying a cabbage leaf to a blister. Place the upper side next to the blister, and it will *draw;* place the under side next to it, and no effect is produced.

VINE AND FRUIT GROWING IN MISSOURI.

The State of Missouri, in its Eastern and Southern section, is a natural vine growing region.—Thousands of wild vines are growing all over its hills and valleys; many of the grapes yielding a wine that is valuable for making claret, and much liked by the Germans in its native purity. Thousands of bushels of the grapes are gathered from these wild vines, one bushel of which it is estimated will make about three gallons of wine, which sells at about fifty cents a gallon from the press.

Seeing the natural adaptation of the soil and climate to the growth of the Vine, Wm. Glascow, Jr., Esq., now President of the Wine Grower's Association, about fourteen years since made the first plantation of the *Catawba* grape vine, for the purpose of wine making; and it is from his example, and the foundation of the Wine Grower's Association, that attention has been so extensively given to the subject.

Vine-growing for Wine purposes has now become a fixed fact here. Already it is estimated that there are, within sixty miles of St. Louis, nearly eight hundred acres successfully cultivated, yielding from two to four hundred dollars a year per acre. Add to this, large vineyards, that are as yet only one or two years old, and you will gather a tithe of the reality of vine-growing in this region.

Vine-growers, and owners of lands generally, are inquiring constantly as to the most successful practices of culture, their costs, and the prospects of pecuniary success. I have just been reading a little essay on vine-growing, by Chas. H. Haven, Esq., of Melrose, St. Louis County, wherein the advantages and profits of Vineyards are well and ably considered, without, as is to often the case, extravagant deductions.

The *Catawba* is about the only grape vine grown to any extent; and if the grower prefers selling his grapes to making wine, he can always find a purchaser in the Wine-Grower's Company, at from seven to ten cents a pound—equal to about one dollar a gallon for the juice.

The best vintners here prepare their grounds in the summer or early fall, and make their plantings in the fall. In fact, nearly everything does better, I am told, to be transplanted in the fall of the year.

While upon Wine, let me tell you of some samples made from rhubarb. The first was made by S. Francis, Esq., the able Secretary of the Illinois State Agricultural Society, only a year (or two perhaps) old; and although pleasant, and without taste of rhubarb, was not superior as a wine. I think it only requires age to make a good heavy wine. The second sample was made by Wm. Glascow, Jr., of St. Louis, seven years since; and although carelessly corked, I found it closely to resemble a Spanish wine that I believe is called Mansinello. I think that very little sugar should be used in making rhubarb wine, and that it wants age ere it is really desirable to drink. For cooking purposes it will be policy to add more sugar, and thus add to its spirit. If you want a receipt for making, I can send you one.

I daily watch the fruit markets, and occasionally visit the country a few miles out, to examine the success of different varieties, and frequently I am troubled to recognize even old acquaintances, so much does soil and climate change their characters. The past season having been quite wet, we are favored with large fruit, most beautifully and highly colored.

Maiden's Blush and old *Kewick Codlin* are two among the most profitable sorts grown. *Yellow Belleflower*, *Ortley or White Belleflower*, and even *Prior's Red* are now retailing in market for eating. They are of course only worm ripened; but the varieties are all fit for eating this month, yet they will keep until January. *Fall Pippin* and *Porter* do admirably here. So also *Rambo*, *Smith's Cider* and *Newtown Pippin*.

The old *Pennock*, or *Big Romanite* as it is here called, are wagoned in by the load, and, like potatoes, rolled out, barrelled, and shipped in great quantities. It is profitable business, the trees being great bearers.

Good Pears are not in this market, but there are many native Pears from old trees planted by the early French Settlers. Occassionnally I have found one that would pass as good, but generally they are too austere. The Pear does finely here, both as a standard and on Quince; but growers, so far as I have seen, no nothing of pruning, nor do they mulch; and this is the climate of all others, where mulching will prove profitable. There are a good many bearing trees of choice Pears in gentlemen's gardens here, which evidence the success that will attend good culture.

You may look to Missouri as the future garden of the West and South. ELLIOTT.

St. Louis, Mo., Dec., 1858.

HORTICULTURAL NOTES FOR THE MONTH.

There is not much that can be done in the garden this month, save making preparations for the coming busy month.

At this time hot-bed frames and sashes should be brought out, washed, painted and mended, and put in order for use the next month. A sufficient portion of manure, fresh from the stable, should at once be got together, and laid in some sheltered place to ferment—either in a shed away from wind and snow, or well covered with some old boards. In six or eight days it will require turning and shaking, and well mixing together. This is necessary, in order that it be all in an equal state of fermentation. Directions for making the hot-beds will be given next month.

About the middle of the month is a good time to prune the hardy grape vines, gooseberries, and currants. Gooseberry trees bear their fruit both upon the new and old wood. All the little, twiggy pieces of wood should be cut out of the body of the tree to about one inch in length, forming little fruit spurs, which will become permanent bearing spurs. Where the trees are desired to increase in size, the leading branches should be cut back to five or six inches in length of the new wood.

Currants may be pruned as above, but they bear mostly upon wood of two years' growth or more. All the fruit-bearing spurs upon the main branches must, therefore, be carefully preserved.

Rochester, February, 1859. JOSIAH SALTER.

The quince will bear a greater amount of salt than almost any other tree. Every fall, after the leaves have fallen, fork in five or six shovelfuls of fresh manure from the stable, about the roots.

RENOVATING OLD APPLE ORCHARDS.

"What can I do with my Apple trees?" asks a Suffolk correspondent; "they are old trees in an old orchard. At one time their fruit was good and fit for market; but now, and for many years past, they are cankered and mossy, and weak, and their fruit is for the most part unsaleable. My gardener says that this has been caused by neglect of pruning scientifically. Is this so? What is meant by pruning scientifically? I am rather afraid of so great a word from the mouth of a man who, although a worthy young felow, seems to me to have nothing scientific about him. And besides I remember being told when in Normandy that although the fruit trees in that Apple country, when pruned upon scientific principles, were beautiful specimens of art, yet that they had the fault of bearing very little fruit."

We fear that our Suffolk friend will find little favor in the eyes of those gardeners who believe that all manner of virtue resides in a pruning knife and narrow saw, and whose greatest pride is to cut their trees into wonderfully regular forms. And yet he is justified in his apprehensions; for there can be no doubt that more harm is done by overpruning, which is too often meant by "scientific" pruning, than can arise from leaving trees to the undisturbed operation of natural processes. In the latter case indeed fruit may be small and bad; but in the former it is as likely to be altogether absent, while the health of trees is irretrievably ruined.

There is no branch of gardening in which experienced or fanciful persons do more harm than in pruning. They seem to forget that fruit trees are grown for the sake of their fruit and not as objects of decoration, and that three ends, and three only, are to be gained by the operation; that is to say, increase of quantity, improvement of quality, and better ripening. Nothing but skilful pruning will effect these purposes; unskilful, in which is to be included unnecessary pruning, has a directly opposite tendency. In short, the golden rule in this case is NOT TO PRUNE AT ALL IF IT CAN BE AVOIDED. Pruning, however, is unavoidable; but it should be had recourse to as little as possible.—As to overpruning, it is we repeat far worse than no pruning at all. One thing is certain, that the more Apple trees are pruned the less they bear; and the same may be said of pear trees.

The author of one of our best practical works, having described how an Apple tree should be managed for the first three or four years, remarks, "after this nothing more will be necessary than to look them (the trees) over from time to time, *cutting out carefully any superabundant branches* that may appear, particularly those which have a tendency to injure the proper figure of the head, or are likely to become stronger than the rest: these latter, if suffered to remain, will injure any description of tree, whether it be a standard, an espalier, or whether it be trained against a wall. This is the best advice that can be given to those who have the management of Apple trees in an orchard. It is like the worthy Mr. GLASSE's instructions to "let them alone." But our Suffolk correspondent's trees are in a state of ruin. They seem to be like the Devonshire trees, which Mr. BELFIED describes "with heads tangled and matted together so as to set both sun and air at defiance; live wood struggling for existence amongst the dead, and all hoary with Moss and premature old age."

With such trees the pruning knife and saw must be used unsparingly; and if that is what our Suffolk correspondent's gardener means by "scientifically" we agree with him. Not that there is much science in the operation. The *first* thing to do is to cut down to the quick every dead branch, limb or spur; they can do no good, and are mischievous on account of the interruption they offer to sun and air, which are as necessary to the tree as to the gardener. Until that has been done live wood should remain untouched. *Secondly*, as soon as the dead wood is gone, and the gardener can see *distinctly* what he has to work upon, he should prune out every shoot that whips or crosses or rubs against another, so as to leave plenty of room between the shoots; a foot is not too much. In doing this the weakest shoots should be removed. *Thirdly*, all the thinning having been done, the end of each branch should be stopped by removing more or less of it according to its strength. *Fourthly*, after the stopping all loose bark and Moss should be scraped off the branches and main stem with the blade of an old hoe or some such blunt edge, and the scrapings should be burnt. In this way alone can insects with their eggs be destroyed with certainty. Such scrapings can do no harm; and in addition to the removal of insects it enables the tree to breathe more freely, a very important matter, for the living bark is as much a portion of an Apple tree's lungs as the leaves are. This done, skill can go no further, and it is only necessary afterwards to leave the tree to its vital powers; watching however how the new shoots grow, and cutting out from time to time all such as in any way whip, chafe, or cross each other.

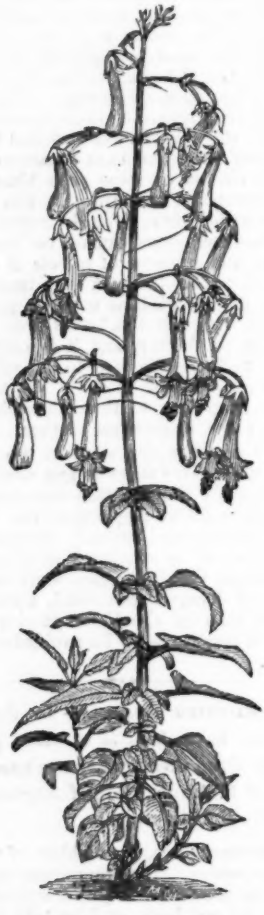
In these remarks the state of the soil is not noticed. If however there is any doubt about its being thoroughly drained, that also must be carefully looked to, for no Apple trees can retain their health in waterlogged ground. Neither can they prosper when soil is exhausted of all its nutritive matter. When that is the case weak manure, such as plenty of decayed leaf-mould, burnt weeds, or any similar material should be employed. Strong ammoniacal manure is to be avoided.—*Gardener's Chronicle.*

EARLY RIPENING GRAPES.—To those of our readers who have *Isabella* or other grape vines that do not ripen their fruit, we commend the experiment of F. ABORN, Esq., of Augusta, Maine, as given in the Maine Farmer:

"A few years since, a neighbor of mine had a vine in his garden. The ground was kept rich and it had the whole garden to gather nourishment from but it would not bear, and he told me that if I would dig it up I might have it. I did so, and pulled it apart, and made four roots of it. I then dug holes snug to my cellar wall just large enough to put in an old barrel without heads, one in each hole, into which I put some leather scraps, a few bones, and rich earth, and then set a root into each barrel. The grapes on these vines have got ripe, while those having the advantage of a wide, rich border, are like those the fox couldn't reach."

THE PHYGELIUS CAPENSIS.

DURING the past season we have had introduced to our notice a new flowering plant, the *Phygelius capensis*, which promises to take a prominent position in our flower beds. It was grown and flowered here, last summer, by Mr. WM. BRIMS, gardener to AARON ERICKSON, Esq., who considers it an invaluable acquisition as a bedding-out plant. The following engraving and description from *Hovey's Magazine* will enable the reader to form a tolerably correct idea of it:



PHYGELIUS CAPENSIS.

"The *Phygelius capensis* is quite hardy in Great Britain, but requires the protection of a frame in our more severe clime. It is a native of the Cape of Good Hope, where it was found on the Witbergen Mountains by M. DREGE, a German collector. In general appearance it resembles a Pentstemon, with a foliage like some of the Salvias. It is perennial. The stem is erect, branched at the base, quadrangular, and grows to the height of three feet. The leaves are oval, cordiform, and crenulate on the edges, nearly two inches long, and supported by a short peduncle. The stem is terminated with a large panicle of tubular, bell-shaped, scarlet flowers, which are suspended in a manner extremely graceful. The limb of the corolla is divided into five lobes.

The Phygelius is a very great addition to our gardens, and is destined to become one of the most popular and admired bedding plants, flowering as freely as the Salvia, and possessing the advantage over it of being nearly hardy, and withstanding rougher treatment during winter; while its showy reddish-scarlet flowers, displayed in great profusion till severe frosts injure their beauty, render it invaluable as a late-blooming plant. Our specimens, the present year, were planted out in the open border in June, where they were one mass of bloom throughout the autumn. In October they were taken up, potted, and placed in a cool greenhouse, and they are now, Nov. 20th, still flowering, forming a pretty contrast with the Chrysanthemums, Veronicas, and other plants, which decorate the conservatory at this season.

The propagation and cultivation of the Phygelius is very simple. Young plants may be raised from cuttings in March or April, in the same manner as the Salvia. These should be potted off, as soon as rooted, in a good compost of loam, leaf mold, and a sprinkling of sand, keeping the young plants in a half-shady situation until they acquire strength, when they may have a shift into larger pots, and be gradually hardened off in frames. In May, or as soon as all danger of frost is over, they may be turned out into the open border, where they will bloom from August until October.

Upon the approach of hard frosts, the plants should be taken up and potted carefully, and placed in the greenhouse or parlor, where they will continue in beauty for a long time. When their flowering is over, the tops may be cut down to within a few inches of the root, and the plants removed to within a few inches of the root, and the plants removed to a cold frame, a cool cellar, or the coolest part of the greenhouse. Here they will need but little attention till the returning season, when they may be again turned out in the open ground, and the second year will form very large and superb specimens, enlivening the border with their gay little scarlet bells, when the early frosts have cut off many of the more tender flowers.

As a pot plant, we doubt not it would form a fine object for the decoration of the greenhouse, grown with the same skill that Chrysanthemums and similar plants are now cultivated."

DWARF PEARS.—The *Country Gentleman* says: "We have repeatedly laid down this rule as a guide, that no one should plant extensively of dwarfs who was not satisfied by previous experiment or by observation among his neighbors, first, that the climate is adapted to their growth; secondly, that the soil is right; thirdly, that the stocks are of the best sort; fourthly, that the cultivation is as good as carrots and cabbages usually receive."

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

[Written for the Genesee Farmer by various Correspondents.]

Butternut Pie.—One quart of milk, two eggs, a coffee-cupful of pulverized butternut meats, and a little sugar and nutmeg.

To Remove Ink from Linen.—Dip the soiled part in pure melted tallow. Wash out the tallow, and the ink stain will be removed with it.

Almond Custards.—Blanch a quarter of a pound of almonds, beat fine; add a pint of cream, two spoonsful of rose water, and the yolks of four eggs. Sugar to taste.

Wiggs.—Half a pint of warm milk, three-quarters of a pound of flour, three spoonsful of yeast. Let it rise, and work into it four ounces each of sugar and butter, and a few carraway seeds. Bake quick.

An Excellent Common Fried Cake—One cupful of sugar, one cupful of cream, three eggs, some cinnamon or nutmeg, and a tea-spoonful of saleratus. Cut in jumbles or in strips, and twist and fry in lard.

Doughnuts without Yeast.—One cupful of sugar, two eggs, one cupful of fresh butter, three cupsful of buttermilk, flour enough to form a dough (not too stiff), and one tea-spoonful of saleratus. Fry in lard.

Bannock.—Two cupsful of meal, two cupsful of flour, one tea-spoonful of salt, one tea-spoonful of ginger, and four spoonsful of molasses. Wet up with buttermilk, adding a tea-spoonful of saleratus. Bake one hour.

Milk Toast.—Boil a pint of rich milk with a table-spoonful of butter, and one of flour. Have ready, in a dish, eight or ten slices of bread, toasted. Pour the milk over them hot, and cover it until it goes to the table.

How to Render Ladies' Dresses Non-combustible.—Add a little powdered alum to the starch used in preparing them. The alum will prevent them from bursting into flame when placed in contact with any burning substance.

Lowell Brown Bread (Capital).—Three tea-cupsful of Indian meal, two tea-cupsful of rye, one-half a tea-cupful of molasses, one tea-spoonful of salt, and one tea-spoonful of saleratus. Mix in one quart of new milk. Bake two hours.

Baked Indian Pudding.—Take three pints of new milk, and scald half of it. Stir in meal until quite thick; then add the remainder of the milk. Beat four eggs, and stir into the batter. Spice and sweeten to taste, and bake two hours.

Raised Biscuit.—To three pints of sifted flour, add one quart of boiling milk. When milk-warm, stir into the batter one cupful of potato or home-brewed yeast, and a tea-spoonful of salt. When light, add one tea-spoonful of soda, four spoonsful of melted butter, two table-spoonsful of white sugar, with flour stiff enough to mold. Make into small cakes. When light, bake in a quick oven.

Cream Biscuit.—Four tea-cupsful of cream, one tea-spoonful of saleratus, dissolved in a cupful of milk. Both milk and cream should be sweet, or both sour. Add one egg, if you choose. Mix soft as you can, and not mold it much. Bake in a quick oven.

Cookies.—One cupful of butter, two cupsful of sugar, four eggs, two table-spoonsful of sour milk, and one tea-spoonful of saleratus, dissolved in the milk. Do not work them stiff, only so as to roll. Bake in a moderate oven. When half done, strew them with grated loaf sugar.

Crullers.—One cupful of sagar, one cupful of milk, half a cupful of butter, two table-spoonsful of cream (if not too thick and rich—if rich, one table-spoonful is sufficient), two beaten eggs, and one tea-spoonful of saleratus. Work well, but not stiff—only so as to roll. Fry fast.

Rice Pudding, with or without Raisins.—One pint of cooked rice, one pint of milk, one tea-spoonful of salt, and the yolks of four eggs. Bake till done; then add the whites of the eggs, beaten to a froth, with four table-spoonsful of sugar. Bake again five minutes. Serve with liquid sauce.

Brown Bread without Yeast.—One quart of Indian meal, one pint of white or brown flour, one tea-spoonful of salt, one-half a cupful of molasses, and one tea-spoonful of soda, dissolved in hot water, stirred into one quart of sour milk, warmed. Beat all together into a batter, and bake slowly two hours.

Indian Meal Puffs.—Into one quart of boiling milk stir eight table-spoonsful of meal, and four spoonsful of sugar. Boil five minutes, stirring constantly. When cool, add six well-beaten eggs. Bake in buttered cups half an hour. Try them with a little butter and maple molasses, and see if they are not good.

Ginger Nuts.—Ten cupsful of flour, three cupsful of molasses, one cupful of melted butter or pork gravy (it is good half and half), one cupful of sour cream, two table-spoonsful of saleratus, dissolved in half a cupful of warm water, and one table-spoonful of ginger. Make soft as can be rolled, and bake quick. This keeps well.

Drop Biscuit.—One quart of sifted flour, one tea-spoonful of salt, one beaten egg, one small tea-spoonful of soda, dissolved in a little hot water, one cupful of cream, two cupsful of sour milk, or buttermilk, and a spoonful or two of white sugar. Stir thoroughly to a thick batter. Drop with a spoon on buttered tins. Bake in a quick oven.

Rabbits and Racoons can be made excellent by dressing nicely, and soaking over night in a plenty of cold water. Then parboil in fresh water; then boil in a second water, with some salt and saleratus. When tender, take out to cool; then cut off the fat, and cut the meat into nice slices. Then heat some butter in a frying-pan, place in the slices, sprinkle on salt and pepper, and fry slowly till a delicate brown. This way of preparing them removes all the wild taste, making the meat perfectly sweet, tender and nutritious. By trying and straining the fat, you have a nice, white oil.

New Advertisements this Month.

American Seed Store.—J. O. Bloss & Co., Rochester, N. Y., and Detroit, Mich.

Spring Garden Seeds.—J. M. Thorburn & Co., New York.

Catalogue of Seeds.—J. M. Thorburn & Co., New York.

Young America Corn Sheller.—Leavenworth & Mason, Rochester, N. Y.

Share's Coulter Harrow, or Pulverizer.—Pease & Eggleston, Albany, N. Y.

The Hooker Strawberry.—H. E. Hooker & Co., Rochester, N. Y.

Grapes by Mail.—C. P. Bissell & Salter, Rochester, N. Y.

Apple Seedlings, and Angers Quince Stocks.—Chas. Moulson, Rochester, N. Y.

Cherry Trees for Sale on Time.—J. D. Conklin, Locke, N. Y.

Chester Co. White Hogs.—Thomas Wood, Penningtonville, Pa.

Poultry for Sale.—S. Smith, Darien Depot, Conn.

New York State Agricultural Society.—Annual Meeting.

JANUARY PREMIUMS.—Our January Premiums for the greatest number or subscribers sent in on or before the 15th of January, have been taken as follows:

1.	G. B. Whiteside, Brockport, N. Y.,	$20	for	116 subs.
2.	Jonathan Miller, Berrysburgh, Pa.,	19	"	107 "
3.	I. W. Briggs, West Macedon, N. Y.,	18	"	97 "
4.	W. Hibbard, Manchester Station, Ct.,	17	"	88 "
5.	B. W. Vansise, Waterford, Pa.,	16	"	74 "
6.	R. W. Sawtell, Woodstock, C. W.,	15	"	70 "
7.	G. Converse, Wilksbarre, Pa.,	14	"	60 "
8.	Chas. Howard, Hamilton, C. W.,	13	"	55 "
9.	Edwin Mallory, Fredericksb'g, C.W.,	12	"	49 "
10.	George Pattison, Crowland, C. W.,	11	"	40 "
11.	Thos. Magee, Johnstown, Pa.,	10	"	39 "
12.	John Dorr, Scottsville, N. Y.,	9	"	38 "
13.	H. E. Smith, Waterloo, N. Y.,	8	"	37 "
14.	Fisher Ames, Frontier, N. Y.,	7	"	36 "
15.	H. W. Moyer, Moyer's Corners, C.W.,	6	"	34 "
16.	J. J. Scroggs, West Point, Ohio,	5	"	33 "
17.	Joshua A. Norrish, Eden Mills, C. W.,	4	"	32 "
18.	James Wilkinson, Goderich, C. W.,	3	"	31 "
19.	James B. Ross, Metuchin, N. J.,	2	"	30 "
20.	R. A. West, Thornhill, C. W.,	1	"	29 "

Our friends can draw on us at sight for the amount, or we will send it by mail or in any other way they may designate.

APRIL PREMIUMS.—On page 71, in this number, will be found a liberal list of premiums for the greatest number of subscribers sent in between the 15th of January and the 15th of April.

There is not one of our readers that can not take one of the largest of these premiums. The *Genesee Farmer* is so cheap that few rural residents will refuse to subscribe when personally solicited to do so. Will not each one of our agents continue their disinterested efforts in our behalf? Considering the vast amount of practical information published each month in the *Farmer*, from experienced agricultural and horticultural correspondents, we think no one will regret having been pursuaded to subscribe for it.

We should feel obliged to any of our readers at post-offices where we have no agent, if they would consent to take subscriptions for the *Farmer* and *Rural Annual*. We shall be glad to send them showbills, specimen numbers, &c. All that is needed to obtain a good list of subscribers in any town or village, is some active friend of the cause to show a copy of the paper and request his neighbors to subscribe. Persons residing in places where we have now but few subscribers, have a better chance of taking the April Premiums than those where a large club has been already formed.

UNPARALLELED SUCCESS OF THE GENESEE FARMER.—The increase in our circulation thus far, this year, has far exceeded our most sanguine expectations. Our receipts are *more than double* what they were last year. We have already worked off three large editions of the January number, and the last edition of nine thousand is now so nearly exhausted that we are obliged to work off another edition before the February number goes to press. It may thus be delayed a few days; but we hope in future to have the paper out so early that every subscriber will get it by the first of the month.

For this unexpected prosperity we are mainly indebted to those true friends of the cause who have volunteered to act as agents in obtaining subscriptions. We return them our sincere thanks, and shall endeavor to make the *Farmer* for 1859 such a paper as no one will regret having recommended to his friends and neighbors.

NOW IS THE TIME TO GET SUBSCRIBERS.—The present is an excellent time to get subscribers for the present volume of the *Genesee Farmer*. Unlike a *news*-paper, the back numbers are as fresh and useful as when first issued. We send this number to a few friends residing in places where we have no subscribers. We shall feel under great obligations to them if they will show the paper to their friends and neighbors, and take and forward subscriptions. Our April Premiums are so numerous, and so few persons compete for them, that a little effort in any of these places will secure a prize. We shall be glad to send showbills, extra numbers for gratuitous distribution, &c.

ALL PRIZES, AND NO BLANKS.—By reference to our Premium List, on page 71 of this number, it will be seen that our premiums are more liberal and numerous than ever before. Those who fail of getting the premiums for the greatest number of subscribers, are certain of the Specific Premiums—so that we have all prizes, and no blanks. We wish it distinctly understood, too, that we not only *offer*, but *pay*, the premiums. So few compete for our premiums that it does not *pay* us, but we shall, nevertheless, *pay* the prizes. Our friends are so disinterested in their efforts to increase our circulation, that they appear to expect no reward for their labors.

A GOOD EXAMPLE.—A year ago, we had but one subscriber at Brockport, N. Y. Our friend, G. B. WHITESIDE, thought this was not creditable to the intelligent farmers in that vicinity. So he showed a copy of the paper to his friends, and, by a very little effort, succeeded in getting *one hundred and sixteen subscribers*. He took the first January Premium, of $20.

Soule's and Blue-Stem Wheat.—A Long Island correspondent of the *Country Gentleman* obtained some seed wheat of the Soule's and Blue-Stem varieties from Michigan. The former proved a failure—was late in ripening, of poor quality, and so much injured by the weavil (midge) that it produced not more than half a crop. On the other hand, the *Blue-Stem* succeeded admirably. "It not only yielded a third more than the Mediterranean, but finer wheat never grew in this [Long Island] or any other section." It took the first premium at the Queens County Agricultural Fair.

To our Exchanges.—We are under great obligations to our brethren of the press for their valuable aid. We would return them our most sincere thanks. Up to this time, over three hundred newspapers in the United States and Canada have given extended notices of the January number—all speaking of it in the highest terms. This manifestation of friendly interest in the success of the "Farmer's Own Paper" is very encouraging. We hope to merit a continuance of their good will.

The Commissioner of Patents invited a number of farmers and horticulturists to meet him at Washington, and advise with the Agricultural Clerk in regard to the distribution of seeds, &c. They met the first week in January, and elected the Hon. M. P. Wilder, of Massachusetts, President. The doings of this "Advisory Board of Agriculture of the Patent Office" appear to have been private, as we have seen no account of them.

Genesee Valley Horticultural Society.—The Annual Meeting of the Genesee Valley Horticultural Society, for the election of officers, appointing committees for the ensuing year, and transaction of business, will be held at the Court House, in this city, on Monday, February 7th, at 10 o'clock A. M. It is desirable that there should be a general attendance of members, citizens, and all in this vicinity interested in horticulture.

The Rural Annual and Horticultural Directory for 1859.—Every reader of the *Genesee Farmer* should have a copy of this excellent work. It is sent, prepaid by mail, for twenty-five cents. In clubs of eight, the *Genesee Farmer* and *Rural Annual* are sent to any address for fifty cents the two, and an extra *Rural Annual* to the person getting up the club.

An esteemed correspondent at the West writes: "I like the *Farmer*—I feel as if having grown wiser under its teachings and influence—and like it better than of old. The people like it—quote it—respect it and favor it."

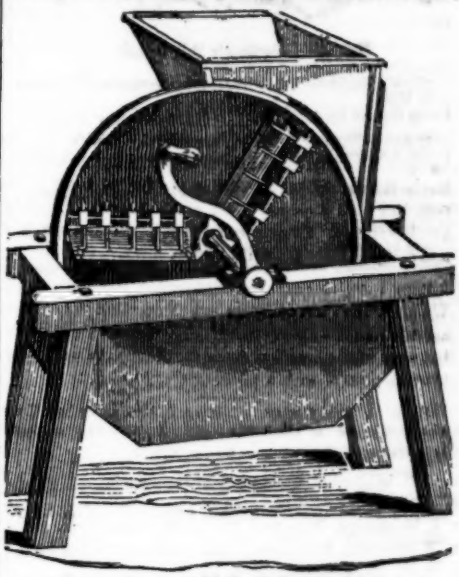
The Annual Meeting of the New York State Agricultural Society will be held at the Capitol, in Albany, on Wednesday, Feb. 9th. See advertisement.

Inquiries and Answers.

Cutting Roots.—I should like to know the best way, and the best machine, for cutting roots for stock, such as sheep and calves. I have some roots larger than I can slice in my straw cutter, which is only nine inches inside. Have weighed one of the English Hybrid yellow turnips, with top, that went twenty-two pounds. For such, I use the axe. I took a first premium at our County Fair on a squash weighing one hundred and forty-eight pounds. I mention this, that you may know the readers of the *Genesee Farmer* succeed best.—F. R. D., *Wolf Lake, Indiana.*

Roots for sheep and calves are best to be cut fine. Many farmers with large flocks, have graters, like the cylinder of a threshing machine, that cut the roots very fine.

The implement most in use is termed a Root Cutter, which is a large circular plate pierced with three slots,



Root Cutter.

into which are fixed blades that slice the root as the plate revolves. These knives have set screws, that graduate the thickness of the slice. Transversely to these blades are a series of small blades, placed near each other, through which the slice is forced in its passage out, and cut into small pieces, or chunks, answering well for feeding cattle, sheep and calves, rendering it the most perfect machine for the purpose with which we are acquainted.

Corn vs. Beans for Sheep.—(P. N. Hall.) The fattening properties of corn and beans are about equal. Beans contain twice as much nitrogen as corn—and, according to the old rule of estimating the nutritious value of foods by their nitrogenous or flesh-forming constituents, fifty pounds of beans would be equal to one hundred pounds of corn. But this rule does not stand the test of experiments, and it is now abandoned by the best chemists, or adopted only with many qualifications. Probably the best practice would be to use a part of each.

There is, however, no doubt on one point—the manure made by sheep fed on beans is much more valuable than that from sheep fed on corn.

Corn Sheller.—(R. S.) You will find the Young America Corn Sheller, manufactured in this city by Leavenworth & Mason, just the thing you want. It is an excellent machine. For further particulars, see advertisement in this number.

Grafting Peach on Cherry.—(W. S. D.) The peach will not succeed worked on the cherry, under any conditions.

APPLE STOCKS — SCIONS — GRAFTING — BUDDING. — (R. McIVER, Cornwall, C. W.) Scions for grafting may be cut any time in November or December, before the weather gets severe, and placed in a cellar until wanted for use.

Apple stocks intended to be grafted, are usually pulled in the fall and laid away in sand, in the root-house or cellar, until they are grafted, which may be done any time during the winter, and the grafts afterwards packed in sand until they are planted. The method of grafting the roots is that known as "whip grafting."

Strong, one-year old stocks, may be planted in nursery rows, and budded the first year.

WINTER BARLEY.—(G. P., Crowland, C. W.) Winter barley can be obtained at the seed stores in this city, and has been worth about one dollar per bushel through the fall. Its yield does not differ much from spring barley, and is variable. Some very large crops have been raised, and many farmers esteem it highly.

BOOK FOR EMIGRANTS.—(A Subscriber, Hamilton, C. W.) We know of no book that we can recommend you. There are many book written especially for the use of emigrants, but none of them we have seen are of much value. There is much need of such a work.

SEED OF RED CEDAR.—Can you inform me where I can obtain the seed of the red cedar? I want to raise some for hedging purposes.—J. W. P., *Gorham, N. Y.*

THOS. MEEHAN, of Germantown, Pa., J. M. THORBURN & Co., of New York, and other principal seedsmen of the eastern cities, usually keep a supply of red cedar and other evergreen seeds.

REVIEW OF THE MARKETS.

ROCHESTER MARKET.—January 22.

Our market exhibits very little activity, and prices are little more than nominal.

FLOUR.—Common brands, $5 a $5.50; good Genesee and Western, $5.50 a $6; Double Extra, $6.50 a $6.75. Rye Flour, $2 per hundred. Corn Meal, $1.88. Buckwheat Flour, $2.

GRAIN.—Wheat—White, choice samples, 125c. a 130c.; Mediterranean, 100c. a 112c. Rye, 63c. a 65c. Corn, 65c. a 68c. Oats, 44c. a 50c. Buckwheat, 44c.

BEANS.—Sales of Beans at 63c. a 75c.

PROVISIONS.—Dressed Hogs, $7 a $7.50. Hams, smoked, 9½c. a 10c. Shoulders, 7½c. a 8c. Beef Carcass, $5 a $6.50. Mutton, $3 a $5. Butter, 16c. a 18c. Eggs, 16c. Lard, 11c. a 13c. Poultry—Turkeys, 9c. a 10c.; Chickens, 7c. a 8c. Apples—Green, 75c. a 100c.; Dried, 150c. Potatoes, 35c. a 40c.

NEW YORK MARKET.—January 20.

GRAIN.—Wheat—Southern White, 135c. a 159c.; Amber, 137½c.; Red, 134c. a 135c.; Michigan White, 142c. a 145c.; Western Red, 133c. a 135c.; Wisconsin Club (Spring), 108c. a 110c. Rye—Brisk, with speculative sales at 90c. a 95c. Barley—Good demand, at 80c. a 81c. Oats—State, 56c. a 60c.; West and Canada, 61c. a 63c. Corn—Market dull; Western, mixed, 87c. a 89c.; Southern Yellow, 86c. a 88c.; Southern, new, 87c. a 88c.

BEANS.—Medium, 110c. a 115c.; Marrow, 138c. a 150c.; Kidney, 163c. a 175c.

FLOUR.—Superfine State, $4.85 a $5; Extra, $5.50 a $5.75; Extra Genesee, $6 a 7.75; Western Superfine, $4.95 a 5.10; Extra (low grades), $5.50 a $5.55; best Ohio Round-hoop, $6 a $7; St. Louis, $6 a $8 50; Canada, extra, $6 a $6.35. Rye Flour, $3.40 a $4.10. Corn Meal, $3.40 a $4.50.

PROVISIONS.—Pork—Market improved; New Mess, $17.75 a $18.00; Clear, $20; Prime Mess, $15.50; Prime, $13.25; Hams, 8¾c. a 9¼c.; Shoulders, 6c. a 6¾c. Dressed Hogs, $7.50 a $8. Beef in fair demand; Country Prime, $6.50 a $7; Mess, $9 a $10; Extra Mess, $11 a $11.50; Extra Chicago, $13.00; Beef Hams, $15.50 a $16.50. Lard, inferior, 11¼c.; Prime. 11¾c. a 11¾c. Butter—Ohio, 11c. a 20c.; State, 15c. a 26c. Cheese, 7c. a 9c. Tallow, 10½c. a 10¾c.

SEEDS.—Clover active, with large sales, a portion for export, at 10c. a 10½c., equal to $6 a $6.80 per bushel. Timothy, $2.25 a $2.50 per bushel. Flax, rough, $1.67½ a $1.70

PHILADELPHIA MARKET.—January 20.

FLOUR.—Superfine, $5 a $5.12½; Extra, $5.50 a $5.75; Extra Family, $6 a $6.25; Fancy, $7.25. Rye Flour, $3.75 a $3.87½. Corn Meal, $3.87½.

GRAIN.—Wheat—Ordinary to Prime Red, 120c.; Common to Choice White, 138c. a 145c. Rye, Pa., 83c. a 85c.; Southern and Jersey, 78c. a 82c. Corn—Dry Yellow, 71c. a 73c.; Damp, 68c.; Old Yellow, 82c. a 84c. Oats—Del., 45½c.; Pa., 46c. a 48c. N. Y. Barley, 80c. a 85c.

PROVISIONS.—Dressed Hogs, $6.75 a $7.50. Pork—Mess, $17.75 a $18; Prime, $16. Beef—Mess, $15.50 a $16. Hams, 10½c. a 12c. Sides, 9½c. Shoulders, 7½. Lard, 11½c. a 12c. Butter, 16c. a 22c. for Pa.; 17c. a 23c. for Ohio; Packed, 40c. a 12c.

SEEDS.—Clover—Prime, $5.75 a $5.87½; Inferior, $5.62½ for 64 lbs. Timothy scarce, at $2.12½. Flax Seed, $1.65 a $1 70.

WOOL.—Sales of 180,000 lbs., as per quality, from 32c. up to 60c., cash.

CATTLE.—Beef Cattle—Common to prime brought 7c. a 10c.; extra quality, 10½c. a 10¾c. Sheep, $3 a $6 per head.

BUFFALO MARKET.—January 22.

GRAIN.—Wheat—Kentucky White, 150c.; Michigan White, 127c.; Ohio Red, 120c.; Chicago (Spring), 85c. Corn—Old, 75c. a 76c.; New, 70c. a 72c. Oats—Canada, 50c. Barley—Dull; State, 60c. a 65c.; Canada, 70c. a 75c. Rye. 70c.

PROVISIONS.—Dressed Hogs, $6.50 a $7. Mess Pork, $16.50; Prime, $12. Mess Beef, $10; Prime, $7. Lard, 10¾c. a $11.

WOOL.—Canada pulled, 35c.; Fleece, 35c. a 45c.; Extra pulled, 35c. a 45c.

SEEDS.—Clover, $6 a $6.25. Timothy, $1.75 a $2.25.

CHICAGO MARKET.—January 20.

FLOUR.—Extra (Spring), $4.50; Common, $4.25; Winter, extra, $5 a $6.25.

GRAIN.—Wheat—Standard, 74c.; No. 2, 72c. a 73c.; Inferior, 60c. a 65c.; Red Winter, 110c. Corn—Shelled, 57c. a 58c.; Ear, 50c. a 51c. Oats—New, 38c. a 46c.; Old, 46c. a 54c. Rye, 65c. a 70c., for 60 lbs. Barley—Canada, 100c. a 120c.; No. 1 Illinois, 65c. a 70c.; No. 2, 49c. a 45c.

BEANS.—75c. a 125c.

SEEDS,—Clover, $5 a $5.25. Timothy, $1.80 a $1.85.

PROVISIONS.—Dressed Hogs, $4.50 for light; $5 a $6 for heavy and extra. Mess Pork, $14 a $16. Shoulders, 5¼c. a 5¾c. Hams—City cured, 10c.; Green, 7c. Butter—Common, 11c. a 18c., Best Dairy, 14c. a 17c. Cheese—Ohio, 7c. a 9c.; Hamburgh, 10c. a 10½c. Lard, 10c. a 10¾c.

WOOL.—Full blood, 32c. a 35c.; Half to three-quarters, 29c. a 32c. Native to one-quarter, 26c. o 28c.

CATTLE.—Good Cattle, $3.50 a $3.75 a $4 per cwt. gross; Common, $2 50 a $3; Light and inferior, $2 a $2.50. The market for good Cattle is quite active—the supply not equal to the demand for shippers and city use. Cows and Calves were sold at $15 a $28 per head. Hogs—Heavy, $4.75 a $5 per cwt.; Light and Inferior, $4 a $4.50 per cwt. Hogs are dull, except for good heavy hogs, which can be sold readily at $4.75 a $5 per cwt. Sheep—Sales at $3.50 a $4.50 per head for Sheep weighing 100 lbs.

TORONTO MARKET.—January 22.

FLOUR.—Market buoyant; Superfine, $5; Extra, $5.50 a $5.75.

GRAIN.—Wheat active and advancing; White Winter, 120c. a 150c.; Spring, 110c. a 120c. Barley, 80c. a 85c. Oats, 50c. a 55c. Rye, 60c. a 63c.

PEAS.—Peas active, at 60c. a 65c.

PROVISIONS.—Pork in the hog, $5.50 a $6.25.

LONDON MARKETS.—January 10.

During the past year the price of Wheat in England has ruled low, with little fluctuation—the highest being the second week in January ($1.50 per bushel), the lowest the last week in December ($1.20 per bushel). The average price of the year was $1.33 per bushel, or 36 cents per bushel less than the average price of 1857. The *Mark Lane Express* says: "The acknowledged deficiency in spring grain has been using up much of the surplus of Wheat, and, as spring advances, we calculate upon a moderately higher range." The last week of the year, the country markets generally evinced some improvement, many to the extent of three cents per bushel. A still further improvement may be expected, as the present rates are less than the average of the eleven years following the repeal of the Corn Laws, in 1846, by 48c. per bush.

Good malting Barley maintains its price, varying from 99c. for common, to $1.23 per bush. for Chevalier. Poor descriptions of Barley are lower, foreign grinding sorts being offered for 66c. per bush. of 50 lbs.

Red Clover Seed was firmer, in consequence of unfavorable reports of the crop; 12c. per lb. was offered, with no prospect of less being taken.

Indian Corn brought from 87c. a 90c. per bush.

American Flour, sour, $4.56 a $4.80 per bbl.; sweet, $5.76 a $6.

Linseed firm at $1.62 a $1.74 per bush. for crushing, and $1.92 for sowing.

In the Wool Market there was a better feeling, in consequence of the unusually favorable reports from the manufacturing districts. Higher prices are expected. The following are the current rates:

South-down Wethers,			38c.
do.	Ewes and Wethers,		34c.
Leicester	do.	do.	32c.

BRIGHTON CATTLE MARKET. January 20.

Market Beef—Extra, $7.50; First quality, $7; Second, $6.75; Third, $5. Milch Cows, $30 a $40; Common, $19 a $20. Veal Calves, $4 a $4.50 a $4.75. Two Years old, $20 a $24. Three Years old, $24 a $30. Hides, 7¼c. a 8c. per lb. Calf Skins, 12c. a 13c. per lb. Tallow, 7¼c. a 8c. Sheep and Lambs, $2 a $3; Extra, $4 a $5 a $6. Pelts, $1.50 a $1.75. Swine—Pigs, 5¼c.; retail, 5c. a 6¼c.

Remarks.—There is a decline on the lower qualities of Beef of from 25c. to 50c. per cwt. Sheep and Lambs sell 50c. per head lower. Swine stationary.

ADVERTISEMENTS,

To secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. Terms—Two Dollars for every hundred words, each insertion, payable in advance.

APPLE SEEDLINGS AND ANGERS QUINCE STOCKS for sale by CHAS. MOULSON,
Feb. 1.—1t. Union Nursery, Rochester, N. Y.

POULTRY FOR SALE.—A few of fifteen different varieties of Fancy Poultry, all full blood, and bred pure. Also, one pair of Turkeys that will weigh fifty pounds. S. SMITH,
Feb. 1, 1859.—1t. Darien Depot Office, Fairfield Co., Conn.

SEEDS! SEEDS!—Our DESCRIPTIVE PRICED CATALOGUE OF VEGETABLE AND AGRICULTURAL SEEDS, for 1859, is now ready for mailing to applicants enclosing a one cent stamp. J. M. THORBURN & CO.,
Seed Warehouse, 15 John St., New York.

N. B.—A Catalogue of Tree and Shrub Seeds will be published shortly, and mailed as above, containing directions for managing Evergreen and other Seeds. Feb. 1.—3t.

GRAPES BY MAIL.—Diana, Rebecca, Northern Muscadine Concord, Hartford Prolific, King, Tokalon, Child's Superb, and forty-six other sorts of hardy native grape vines for sale.

Well-rooted plants can be prepared for planting, and sent by mail, carefully packed in oiled silk, and postage paid, on receipt of one dollar each. Delaware and Logan vines at three dollars each. Address C. P. BISSELL & SALTER,
Feb. 1, 1859.—4t. Rochester, N. Y.

YOUNG AMERICA CORN SHELLER AGAINST THE WORLD!

THE SUBSCRIBERS have purchased the right of the Young America Corn Sheller, which is acknowledged by all to be the best Sheller ever invented, being simple and durable in its construction, not liable to get out of repair, and requiring less power to propel it than any other Sheller ever made; can be operated with ease by a boy ten or twelve years old, shelling at the rate of one bushel of ears per minute.

Awarded First Premium at New York State Fair, Buffalo, 1857. Also, Premium and large Silver Medal at New York State Fair, at Syracuse, October, 1858.

The Machines can be had of the undersigned.

To Dealers and Manufacturers—We have the rights of the following States yet for sale: Pennsylvania, Kentucky, Maryland, Virginia, Tennessee, North and South Carolina, and California. Also, forty Counties in the State of New York.

All communications addressed to the undersigned, will receive prompt attention. LEAVENWORTH & MASON,
Manufacturers, corner of State and Perkins Sts.,
Feb. 1, 1859.—1t. Rochester, N. Y.

SHARE'S COULTER HARROW, OR PULVERIZER

IS the most superior machine for pulverizing the soil, whether *heavy old sod or stiff clay land*, that has ever been introduced among farmers. The teeth are a series of coulters placed in a three-cornered frame, and cut the soil or sod, pulverizing it several inches deep, instead of tearing it as the common scratch or Geddes harrows and large two-horse cultivators do. It leaves the soil in the most perfect order, and it accomplishes more in being drawn on plowed land once, than can be done by cross-plowing and harrowing with a common harrow combined. The weight of the machine is 189 pounds—its draft lighter than the common Scotch harrow. The experience of Mr. John McHarg, one of the best farmers of the town of Bethlehem, in this county, has convinced him that it is the best instrument for saving labor in cultivating land he has ever seen, and we are privileged to refer to him as to its superiority. The crop of a quarter of an acre will pay for the machine. The price is within the means of every farmer, being only $15.

Our POTATO AND CORN HOEING, HILLING AND CULTIVATING MACHINES are the "Ne Plus Ultra" of such implements, and will save their cost in three days' work. They cost only $10; and every one who uses them says they are worth five times that amount. RESPONSIBLE AGENTS WANTED.

For further particulars, and Catalogues, address
PEASE & EGGLESTON,
Feb. 1, 1859.—1t. 84 State St., Albany, N. Y.

RUSSIA OR BASS MATTS—Selected expressly for budding and tying. GUNNY BAGS, TWINES, &c., suitable for Nursery purposes, for sale in lots to suit, by
D. W. MANWARING, Importer,
August, 1858.—1y* 248 Front Street, New York.

THOMAS WOOD—Continues to ship to order, to any part of the Union, his celebrated UNITED STATES PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, on reasonable terms. Address, Pennington ville, Chester Co., Pa.
Feb. 1, 1859.—1t*

AMERICAN SEED STORE.

J. O. BLOSS & CO., PROPRIETORS,

ROCHESTER, N. Y., & DETROIT, MICH.

TO our patrons and the trade we tender our most cordial thanks for that ample patronage which has enabled us, from a small beginning, to increase our trade in the past five years, until, in point of celebrity *in the Seed business*, we stand second to no house in the United States.

Such has been the increase during that time, that we have been able to establish a large and prosperous Seed House at Detroit, Mich., from which supplies are sent to customers west of Lake Erie; while from the parent house at Rochester, Seeds are supplied to the trade as far east as New York City, New Jersey, and Pennsylvania; also west to Ohio, and north to Canada.

In August of the past year our store at Rochester was burned; since which time we have purchased the ground on which it stood, and have now constructed and use a building of twice its size, fitted up expressly for the Seed business, and which is said to be the best arranged store for the purpose in the United States, and equaled by only one in Europe, which is in France.

For this measure of prosperity, we are indebted to the liberal patronage and confidence of an enlightened public, and to those generous friends who have so kindly lent us their aid in times of need, and to all of whom we take this occasion to tender our grateful acknowledgements.

For the year 1859, we offer to the trade as large, new and fresh a stock of Seeds, and at as low prices, as any house in the country. We are now receiving in store, of the best Seed,

150 bushels Skirvings Red Top, and Laing's Improved Ruta Baga Turnip Seed.
100 bushels White and Red-top Flat, Norfolk, White Globe, Red-top Globe, Flat Dutch, White Stone, Yellow, Scotch, and Red-top Strap-leaved Turnips.
600 lbs. new fresh Drumhead Cabbage.
600 " " fine Flat Dutch "
400 " " " Early York "
400 " " " Large " "
300 " " " Sugar-loaf "
100 " French Ox-heart "
100 " Green Globe Savoy "
Two to three tons Garden Beet Seed, in varieties, and a similar quantity of Field Beet Seed.
Two tons assorted Garden and Field Carrot Seed, with a full catalogue of the finer Seeds, in due proportion.
Two tons Cucumber Seed, of all the varieties.
1000 bushels Missouri Irish and Black-eyed Marrowfat Peas.
100 " Early Washington.
100 " Early Kents.
100 " Blue Imperial.
Besides choice imported English Dwarf Peas.
All the desirable kinds of Early Garden Beans; and last, though not least,
25 bushels White Lima Beans.
50 " London Horticultural Beans.

For more definite information, reference may be had to our Wholesale and Retail Catalogues, forwarded to all applicants.

We are also making arrangements for receiving 1000 bushels Hungarian Grass Seed, of which only one-fourth of a bushel is required to seed an acre, and which yields two and three tons of hay per acre. Also, a large supply of Illinois and Wisconsin Timothy Seed, as well as choice Clover Seed, to all of which we invite the attention of our former patrons, and the public generally.

J. O. BLOSS & CO.,
Rochester, N. Y., and
BLOSS & CO.,
Feb. 1, 1859. 22 Monroe Avenue, Detroit, Mich.

SEEDS AT WHOLESALE.

BY reason of the abundant crops generally this season, we are prepared to offer unusual inducements to purchasers of SEEDS in large quantities.

Our Annual Trade List for 1859 is just published, and will be mailed to applicants enclosing a three-cent stamp. Although most Seeds are plentiful, we would advise our customers to send their orders *early*, as no matter how abundant, the stock of some of the rarer varieties generally becomes exhausted as the season advances.

J. M. THOEBURN & CO.,
Jan. 1859.—2t. 15 John st., New York.

FANCY POULTRY.

A FEW choice specimens of the following varieties of Fowls may be had if applied for soon:

Golden Spangled Hamburgs,—Price, 1 cock	and	two	hens,	$8 00
Silver "	"	"	"	6 00
Golden " tufted "	"	"	"	7 00
White Faced Black Spanish,	"	"	"	10 00
Dominique, large and fine,	"	"	"	5 00
Golden Spangled Sebright Bantams,		"	"	7 00
Silver "	"	"	"	8 00
Black African, rose comb,	"	"	"	7 00
White, rose comb and smooth-legged,		"	"	6 00

Caged and delivered at Express Office at Poughkeepsie, without further charge. Apply to C. N. BEMENT,
Jan. 1859.—2t. Springside, Poughkeepsie, N. Y.

SPRING GARDEN SEEDS.

J. M. THORBURN & CO.,

15 JOHN STREET, NEW YORK,

HAVE now in store their entirely new stock of SEEDS, comprising VEGETABLE, FIELD, HERB, FLOWER AND TREE SEEDS, warranted fresh and true to name. The superior quality of the following we particularly recommend, all of which are required *early:*

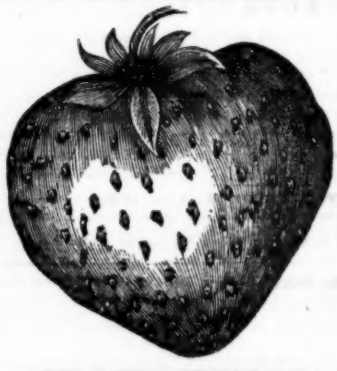
	cts.
Broad Windsor Beans, per quart,	20
Extra Early and Blood Turnip Beet, each, per oz.,	10
Purple and White Cape Brocoli, " "	40
Early Winningstadt and Oxheart Cabbage, each, per oz.,	30
Early and Giant White Solid Celery, " "	20
Prize-fighter and other Frame Cucumbers, per pkt.,	25
Improved New York Purple Egg Plant, per oz.,	30
Early White Vienna Kohlrabi, "	20
Early Curled Silesia Lettuce, "	20
Extra Curled Parsley, "	10
Extra Early Daniel O'Rourke Peas, per quart,	30
" " Sangster's No. 1 " "	30
" " Burlington " "	30
" " Tom Thumb " "	75
Fairbeard's Champion of England " "	30
Napoleon and Eugenie " each, "	75
Long Cayenne and Squash Pepper, " per oz.,	40
Early Scarlet Turnip and Frame Radish, each, per oz.,	10
Round Spinach, per lb.,	50
Early Red, Smooth, and Mammoth Tomato, each, per oz.,	25
Norway Spruce and European Silver Fir, " per lb.,	100
Deciduous Cypress Seed, per quart,	30
Red Cedar, "	25
Black Austrian and Pitch Pine, each, per lb.,	300
Scotch Fir, "	150
Chinese Arbor Vitæ, "	300
Yellow and Honey Locust, " "	75
Osage Orange, per quart,	75
Kentucky Coffee Tree, per quart,	150
Virgilia Lutea (a very rare tree), per oz.,	200
Apple Seed, per bushel, $2: per quart,	50
Pear and Quince Seed, each, per lb.,	250
Apricot Pits, per quart,	75
Lucerne Seed, per lb.,	25
Best White Clover, per lb.,	30
French Mixed Lawn Grass (extra), per bushel,	500
Perennial Rye " "	300
Orchard " "	150
Kentucky Blue " "	175
Early Potatoes, six varieties, from $1.50 to $2.50 per bushel.	
Dioscorea Batatas, or Chinese Potatoes, fine roots, $1.25 per doz.	

The following CATALOGUES will be sent to all desiring them, by enclosing for each or any one of them a one cent stamp:

Catalogue of Flower Seeds.
Catalogue of Vegetable and Agricultural Seeds.
Catalogue of Tree and Shrub Seeds.

☞ Also, Trade Lists of the above, for Seed Merchants.

J. M. THORBURN & CO.,
Growers and Importers of Seeds.
Feb. 1, 1859.—2t. 15 John St., New York.



THE HOOKER STRAWBERRY

MAY be obtained pure, and *in any desired quantity*, from the grounds where it originated. It has only to be known to be appreciated. Its advantages are perfect hardiness, flowers perfect, and great productiveness. Berry of the highest color and largest size, and, *best of all*, most exquisite flavor.

Price, $2 per hundred, $15 per thousand.

Order for spring planting, if only a few for trial, of

H. E. HOOKER & CO.,
Feb. 1, 1859.—3t. Commercial Nurseries, Rochester, N. Y.

THE

GENESEE FARMER

FOR 1859.

LIST OF PREMIUMS.

The terms of the GENESEE FARMER are: Single Subscribers, Fifty Cents a year, in advance; Five Copies for Two Dollars; Eight Copies for Three Dollars; and any larger number at the same rate. All subscriptions to commence with the year.

In addition to this reduction of one-fourth, we offer the following List of Specific Premiums as an extra inducement for our friends to form Clubs. It will be seen that they are more liberal than ever before.

SPECIFIC PREMIUMS.

1. To every person who sends us EIGHT Subscribers, *(at our lowest terms of thirty-seven and a half cents each,)* we will send, postage paid, a copy of our beautiful twenty-five cent book, the *Rural Annual* for 1859.

2. To every person who sends us SIXTEEN subscribers, (at our lowest club terms of *thirty-seven and a half cents each,*) we will send one extra copy of the *Genesee Farmer* and one copy of the *Rural Annual*, pre-paid, by mail.

3. To every person sending us TWENTY-FOUR subscribers, as above, we will send two extra copies of the *Farmer*, or two copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural work valued at fifty cents, postage paid.

4. To any person ordering THIRTY-TWO copies of the *Farmer*, as above, we will send three extra copies of the *Farmer*, or three copies of the *Rural Annual* and one extra copy of the *Farmer* or any agricultural work valued at seventy-five cents, postage paid.

5. For FORTY, four extra copies of the *Farmer*, or four copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at one dollar, postage paid.

For larger numbers, books or papers will be given in the same proportion, unless, as is most probable, they take one of our large Cash Premiums for the greatest number of subscribers.

☞ To save expense to our friends, we pay the postage on all these works, and persons who are entitled will state what they wish sent, and make their selections when they send orders; or, if their list is not complete, if wished, we will delay sending until the club is full.

APRIL CASH PREMIUMS

For the Greatest Number of Subscribers.

As some compensation to our numerous friends for their disinterested efforts in increasing the circulation of the *Genesee Farmer*, we offer the following List of Cash Premiums for the greatest number of subscribers sent in *after the fifteenth day of January* and before the *fifteenth day of April*. Those who took the January Premiums will be allowed to compete for the April Premiums; but in this case, and in all others, the lists sent in previous to the fifteenth of January will not be counted. The premiums will be awarded to those who send in the greatest number of subscribers between January 15 and April 15. The names of the successful competitors, together with the number of subscribers, will be announced in the May number, and the Premiums immediately paid.

1. TWENTY DOLLARS, in Cash, to the person who shall send us the largest number of subscribers (at the lowest club price of 87½ cents each,) before the 15th day of April, 1859. (The order with the money must be *received*, not mailed, on or before the 15th of April.

2. NINETEEN DOLLARS to the person who shall send us the second highest number, as above.

3. EIGHTEEN DOLLARS to the person who shall send us the third highest list, as above.

4. SEVENTEEN DOLLARS to the person who shall send us the fourth highest list, as above.

5. SIXTEEN DOLLARS to the person who shall send us the fifth highest list, as above.

6. FIFTEEN DOLLARS to the person who shall send us the sixth highest list, as above.

7. FOURTEEN DOLLARS to the person who shall send us the seventh highest list, as above.

8. THIRTEEN DOLLARS to the person who shall send us the eighth highest list, as above.

9. TWELVE DOLLARS to the person who shall send us the ninth highest list, as above.

10. ELEVEN DOLLARS to the person who shall send us the tenth highest list, as above.

11. TEN DOLLARS to the person who shall send us the eleventh highest list, as above.

12. NINE DOLLARS to the person who shall send us the twelfth highest list, as above.

13. EIGHT DOLLARS to the person who shall send us the thirteenth highest list, as above.

14. SEVEN DOLLARS to the person who shall send us the fourteenth highest list, as above.

15. SIX DOLLARS to the person who shall send us the fifteenth highest list, as above.

16. FIVE DOLLARS to the person who shall send us the sixteenth highest list, as above.

17. FOUR DOLLARS to the person who shall send us the seventeenth highest list, as above.

18. THREE DOLLARS to the person who shall send us the eighteenth highest list, as above.

19. TWO DOLLARS to the person who shall send us the nineteenth highest list, as above.

20. ONE DOLLAR to the person who shall send us the twentieth highest list, as above.

There is not a town in the United States where any person, by showing his neighbors a copy of the paper and asking them to subscribe, might not take some of the largest of the above Premiums.

Those who do not take any of the Cash Premiums, will be sure of the Specific Premiums, so that we have no blanks.

CLUBS are not required to be at one Post Office, or sent to one address. We send wherever the members of the club may desire. Names can be added to a club at any time.

A TWENTY-FIVE CENT PREMIUM TO EACH SUBSCRIBER!

Rural Annual and Genesee Farmer in Clubs.

As a still greater inducement to form Clubs, we offer the GENESEE FARMER for one year and our beautiful twenty-five cent book, the RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1859, in clubs of eight or upwards, at Fifty Cents the two. In other words, for FOUR DOLLARS we will send *eight copies* of the FARMER for one year and eight copies of the RURAL ANNUAL, together with a RURAL ANNUAL for the person who gets up the Club. For EIGHT DOLLARS we will send *sixteen copies* of the FARMER and *sixteen copies* of the RURAL ANNUAL, and one extra copy of *each* for the person who gets up the club.

Any person sending us THREE DOLLARS for a club of eight of the GENESEE FARMER, shall receive one copy of the RURAL ANNUAL for his trouble.

We send the club to one address, or write the name of each subscriber on his paper, as requested.

POSTAGE.—The postage on the FARMER sent to any place in the State of New York, paid quarterly in advance, is three cents a year; to any other place in the United States, six cents a year. We pay the American postage on all papers sent to the Canadas, or any of the other British Provinces. In all cases we pay the postage on the RURAL ANNUAL.

Our Agents, and Competitors for the above Premiums, will remember that our terms are always IN ADVANCE. One Copy, FIFTY CENTS A YEAR; Five Copies for TWO DOLLARS; Eight Copies for THREE DOLLARS, and any greater number at the same rate (*three shillings per copy.*)

☞ Subscription Money may be sent by mail *at my risk, and you need not "register" the letters.*

Address JOSEPH HARRIS,
February, 1858. ROCHESTER, N. Y.

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CHERRY TREES FOR SALE ON TIME.—The subscriber offers, for the spring trade, a very fine lot of strong-growth Cherry Trees, from two to four years old, in bearing state, embracing all the leading varieties. Also, a general assortment of Apples, Pears, Peaches, Plums, Apricots and Grapes. Also, Mazzard Cherry Pits, Cherry Seedlings one year old, and Potato Seeds from the ball.
Feb.—1t. J. D. CONKLIN, Locke, Cayuga Co., N. Y.

NEW YORK STATE AGRICULTURAL SOCIETY.—Annual Meeting, WEDNESDAY, FEB. 9th, at the Capitol, Albany. Addresses on Wednesday evening. Exhibition of Grain, Dairy Products, Fruit, &c., on Thursday, at the Society's Rooms. In the evening, Annual Address by President McCoun.
B. P. JOHNSON, Sec'y.
Agricultural Rooms, January 1st, 1859. Feb. 1, 1859.—1t.

"EVERY BODY SHOULD HAVE A COPY."

THE

Rural Annual and Horticultural Directory

FOR 1859.

THIS work was started in 1856, by the publisher of the *Genesee Farmer*. Its great success affords conclusive evidence, not only of its intrinsic merit, but of its adaptability to the wants of the rural population. A new volume, prepared with great care and replete with new and valuable matter, is issued each year. The fourth volume, for 1859, has appeared, and is a book which cannot be too highly recommended—alike beautiful, interesting, and useful. The articles are all written for its pages by men of experience. It is illustrated with seventy-five appropriate and beautiful engravings.

Among its contents may be mentioned able treatises on Underdraining Orchards and Gardens, on the Fruits of the Ohio Valley, on Fruit Culture in the West, on the Cultivation of Fruit Trees in Pots under Glass, on Training Wall and Espalier Trees, on the Cultivation of Bulbous Plants, on the Management of Ducks, Geese, and Swans, on British Breeds of Cattle, on the Cultivation of Ruta Bagas, &c., &c., and a List of Fruits recommended by the American Pomological Society at its last session.

The work will be found invaluable to the Fruit Grower, and useful to every one interested in Rural affairs.

It is furnished at the low price of Twenty-five Cents,—while it contains as much matter as many dollar books. *Every one who owns a rod of ground should have it.* It is sent pre-paid by mail to any address on the receipt of twenty-five cents in coin or postage stamps. Address JOSEPH HARRIS,
Publisher and Proprietor
Of the Genesee Farmer and Rural Annual,
Rochester, N. Y

The back numbers, for 1856, 1857, and 1858, can be furnished at twenty-five cents each, postage paid.

CHINESE OR SWAN GEESE.

ONE pair of White Chinese goslings,—Price per pair.. $10 00
Three pairs Brown do. do. " " ... 5 00
Several pairs of Musk or Brazillian Ducks, " " ... 3 00

ALSO,

Three pairs FAWNS, bred at Springside, from Southern Domesticated Deer, much finer and handsomer than our northern Deer. Price, caged and delivered at Depot or Express Office in Poughkeepsie, $30. C. N. BEMENT.
Springside, Po'keepsie, N. Y., Jan. 1859.—2t.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Animals, Implements, Fruits, &c.

VOLUME XIX, FOR 1858.

Fifty Cents a Year, in Advance.

Five Copies for $2; Eight Copies for $3; and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Farmers, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Specimen numbers sent to all applicants.

Subscription money, if properly enclosed, may be sent at the risk of the Publisher. Address
JOSEPH HARRIS,
JANUARY 1, 1858. *Rochester, N. Y.*

POSTAGE.—The postage on the Farmer, sent to any place in the State of New York, paid quarterly in advance, is three cents a year; to any other place in the United States, six cents a year. We pay the American postage on all papers sent to the Canadas, or any of the other British Provinces.

STEREOTYPED BY LENNOX & WHITE, ROCHESTER, N. Y.